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EFL Students' Cognitive, Creative, and Affective Needs in Creative Writing Courses

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ABSTRACT
Creative writing (CW) has recently been infused into English as foreign language (EFL) curricula worldwide. Yet, its implementation remains challenging due to limited knowledge of students' needs required to design effective CW instructions. This study explored EFL students' cognitive, affective, creative, and pedagogical needs in CW courses within Indonesian higher education. Adopting a sequential explanatory design, 40 college students participated. Qualitative data obtained from observations was analyzed thematically, while quantitative data collected using a questionnaire was analyzed using descriptive statistics. Later, the two strands were merged through joint displays and narrative integration. The cognitive domain findings showed students' strong ideation strategies knowledge but high needs for practice, strong feedback approval, and deep revision challenges. Findings in creative and affective domains disclosed students' strong creative openness and motivation through publication, together with struggles with divergent thinking and authentic voice. Pedagogical domain findings revealed preference for scaffolded support and a significant need for problem-solving and peer review skills. All domains interact through learning strategies, scaffolds, and dispositions, shaping students' readiness dynamic. Thus, combining creative expression and cognitive strategy improvement while addressing affective and pedagogical needs through complementary customized supports is crucial in CW courses.

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INTRODUCTION

Creative writing (CW), defined as the process of conveying ideas, thoughts, and emotions imaginatively (Kenny, 2011), has recently arisen as an effective pedagogical tool to restore the creative pedagogical practices fading from language classes due to the pressure to teach for high-stakes tests (Maloney, 2019; Stock & Molloy, 2020). Studies have reported numerous advantages of CW integration into EFL classrooms. It improves writing skills, fluency, and confidence, autonomy, and audience awareness (Maloney, 2022; Yeh, 2017) and nurtures language aptitude, critical thinking, and creativity (Bozdoğan & Ekmekçi, 2024). Considering the advantages, many countries have infused CW into their EFL curricula or offered it as an independent course (Burkšaitienė (2014; Chamcharatsri & Iida, 2022; Yeh, 2017).

As it merges language development with cognitive engagement, personal expression, and cultural identity, CW course implementation promotes students' growth but requires quick adaptation and various skills acquisition, making for a steep learning curve (at least in the initial implementation). This is clearly visible in CW instructions in Indonesian EFL settings that still face persistent challenges. Larasaty and Yulianawati (2019) reported students' struggles with CW due to limited vocabulary, insufficient ideation techniques, time constraints, anxiety, low self-confidence, and inadequate idea generation skills. Octavia (2025) found CW students wrestled with linguistic, cognitive, psychological, and pedagogical problems. These issues largely stem from instructional designs disregard of students' needs, a crucial factor to ensure their readiness to participate in the course.

Since CW integration into EFL curricula is a brand new practice, it still searches for effective methods, and research on CW students' needs analysis is still meager. Burkšaitienė's (2014) case study on Lithuanian university students' needs in CW revealed the students' expectation of gaining better knowledge of the nature of creativity and CW, learning specific knowledge about CW and its process, having the opportunity to practice more CW, and using English as the medium of their studies. Asri et al. (2022) reported that students expected to have more CW practices aligned with their abilities and interests, learn by focusing on creativity and accuracy building, use effective learning methods, and have accessible learning resources. Jasril and Asmawati (2025) found that students in short story writing courses benefited from using a problem-based flipped classroom model, favored a problem-based learning approach, preferred digital learning media adaptable to individual pacing, and expected continuing, collaborative evaluations. These studies focus merely on some of the CW factors listed by Barbot et al. (2012), leaving conative and executive functioning factors unexplored. Therefore, more studies are needed to get a more comprehensive understanding of students' needs in CW courses.

To address the gap, the present study aims to explore students' needs in CW instruction at the English Language Education (ELE) program of Universitas Kristen Indonesia (UKI) Jakarta. The program has offered CW as an independent course for three years. The course design was adapted from the curricula of other Indonesian ELE programs. No needs analysis has been conducted. Thus, this study was also a preliminary phase for designing a more responsive CW curriculum at the program. Considering that CW development does not only involve cognitive and language skills acquisition but also emotional engagement, imaginative exploration, and instructional support, this study focuses on cognitive, creative, affective, and pedagogical dimensions to explore a more comprehensive and subtle account of students' needs. Regarding this, the following research questions are formulated to address in the study:

1. What cognitive processes do ELE UKI students consider essential for success in CW courses?
2. How do they conceptualize creativity in writing, and what supports or hinders it?
3. How do they describe their affective experiences and motivational factors in CW activities?
4. Which pedagogical practices and resources do they view as most supportive?

LITERATURE REVIEW

To identify students' needs in CW courses, a comprehensive understanding of writing nature and pedagogy is foundational. According to (Forgeard et al., 2013), the intricate and multidimensional of CW can only be sufficiently understood through an interdisciplinary outlook. In this regard, this review discusses CW through cognitive, creative, affective, and pedagogical dimensions, highlighting that their interplay shapes students' needs.

Cognitive Dimension of CW

In the cognitive perspective, writing is a process that activates complex cognition like analyzing, evaluating and synthesizing while relying on language knowledge and metacognitive awareness. This view is grounded on various theories. Flower and Hayes' (1981) cognitive process theory of writing, viewing writing as a dynamic interplay of planning, translating, and reviewing, provides a framework to explore how learners complete their writing tasks. Using cognitive processes such as attention, working memory and metacognition, students are able to exploit real-world experiences for inspiration, and construct a creative piece from these experiences and ideas. Bloom's updated taxonomy places analyzing, evaluating, and creating, at the higher levels of cognitive ability further clarifies the roles of higher-order thinking skills in original ideas generation and problem solving. Engaging with them enables students to produce original work demonstrating their mastery of the topic.

Cognitive Load Theory (Paas & Sweller, 2012) posits that human working memory capacity to process information is limited, which weakens learners' ability to absorb and preserve information while facing excessive cognitive load. Since writing requires students to recall relevant knowledge, organize ideas, and express them clearly to produce quality texts, reducing their cognitive load is necessary. Jiang et al. (2021) accentuated that to reduce students' cognitive load, provided cognitive activity, such as feedback, should be timely and aligned with students' current understanding level and the learning material complexity. Strategies to reduce cognitive load include dividing tasks into smaller, manageable parts; using visual tools (e.g., mind maps); offering clear assignment instructions; creating low-stress learning environments; making content relevant to increase motivation; and providing short breaks to avoid mental fatigue (Koudsia, 2024).

Metacognition, commonly used by proficient writers in draft assessment, progress monitoring, and techniques adjustment, is essential to empower learners in CW. One of the metacognitive activities that students often struggle with is revision (Blake et al., 2024). An effective strategy to address this is using revision scaffolding, which can improve learning performance as it reduces cognitive load and frees up mental resources (López-Vargas et al., 2017). This is confirmed by Sachar (2020), who reported that an effective revision framework help students use metacognitive skills to conduct substantial revisions.

Creative Dimension in CW

In creativity theories perspective, CW is an activity involving originality, elaboration, fluency, and flexibility (Torrance, 1998). Originality emphasizes that CW's goals extend beyond coming up with unique ideas. It also entails rethinking well-known topics in novel ways, incorporating one's true voice, using individual experiences and emotions, and creating new or different viewpoints on themes, characters, and events. Amabile (1988) accentuated that creativity requires skills and intrinsic motivation. To promote originality, Voice Writing Theory (Xiao, 2024) suggests the needs to cultivate and celebrate the unique voice every writer's has by encouraging students to write in ways that truly represent their individuality, experiences, opinions, and perspectives. Hanauer (2012) reported that using personal and cultural narratives makes students' works more authentic and engaging and fosters a higher sense of ownership. Alshhre (2023) supports this by reporting the potentials of literature hybridization, i.e., combining different literary and cultural traditions, styles, and genres to create a unique and innovative literary form.

Elaboration helps learners turn basic ideas into compelling narratives by adding details. Elaboration strategies include asking the 5W's + 1H questions and 'Show, don't tell' method, which uses actions and sensory details rather than stating facts to elaborate writing. Kohn et al. (2011) propose another strategy called group information exchange, which an help build on relatively rare ideas to generate novel and useful ideas.

Fluency assists learners to come up with various ideas and convey them in a clear, concise, and captivating way. Students can actualize this by growing tolerance of ambiguity, the ability to handle or use novel, unfamiliar situations or expressions without becoming discouraged. It facilitates expressive language creation by allowing students to consider many interpretations and outlooks.

Flexibility, facilitated by convergent and divergent thinking, enables learners to write using new genres, structures, tones, and perspectives and to generate, refine, and blend several ideas into a cohesive story. Flexibility can also grow through experimentation with language, voice, and perspective, which can be implemented by combining global literary forms with local cultural elements.

Affective Dimension in CW

In CW courses, affectivity is vital because CW is both a personal and social, analytical and emotive endeavor. Some theories have contributed to the importance of affectivity in writing. Sternberg's (2006) Investment Theory of Creativity hypothesizes that there are two crucial factors for creativity: a personal decision and creativity components (i.e., intelligence, knowledge, thinking styles, motivation, and personality) and supportive environment. Thus, in CW contexts, any student can learn to be a creative writer if they decide to and if the environment supports the decision.

Self-Determination Theory, accentuating the roles of competence, autonomy, and relatedness intrinsic motivation growth (Ryan & Deci, 2016), implies that students must be given the chance to choose topics to write about, incorporate personal experiences, and establish a connection with their audiences to boost their engagement and emotional attachment. It is supported by Alzubi and Nazim's (2024) finding, which showed that writing on self-selected subjects boosted students' intrinsic drive and subsequently improved their idea formulation and diction selection. Syrewicz (2023) lists seven motivational constructs that help improve the CW process. They include intrinsic motivation (including perceived autonomy, perceived competence, and perceived relatedness), interest (and topic knowledge), self-efficacy, mastery goals, performance-approach goals, self-regulation, and

alternating between playing and revising. To conclude, CW learning alignment with learners' personal and social identities enhances engagement and creativity. Thus, mapping students' affective profiles can help foster learners' confidence, ownership, and passion.

Pedagogical Dimensions in CW

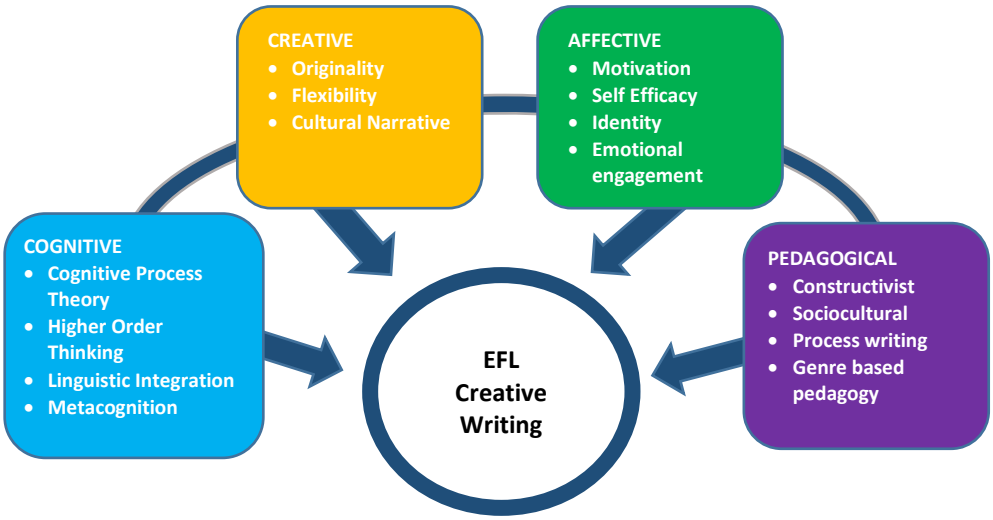
From the cognitive and creative perspective, CW is a mental process for creating creative works employing imagination, whereas pedagogical domain views it as a learning process in which learners get knowledge and enhance skills through direct experience and reflection (Mata & Gavrilut, 2025). This indicates that the experiential learning approach is effective for CW courses, as it insists learners to actively engage with new experiences, links knowledge to particular moments, treats risks as an essential part of the process, and prioritizes inquiries into real-world and critical reflection for meaningful learning (Morris, 2020). The Constructivist Theory (Mascolo & Fischer, 2005), grounded on the idea that students create their knowledge through hands-on involvement, accentuates the need for them to explore their own lives, imagination, identity , and culture while engaging in CW. Finally, emphasizing learning as a socially mediated endeavour, Sociocultural Theory (Vygotsky, 1978) suggests the use of peer collaboration in CW to encourage inspiration and stimulate novel story generation.

As stated earlier, risks are inevitable in CW. They are even part of the process that help students adapt, develop and become more resilient. The question is how to empower students to solve the problems. Recent educational research and practices have revealed computational thinking (CT) as an effective multidisciplinary tool for learning, knowledge creation, and solving problems. It has been included into the curricula of various fields (Li et al., 2024). Various CT skills can help students and uplift their CW performances. Abstraction skill, for instance, can help conceptualizing character arcs or thematic patterns. Pattern recognition is useful for understanding the structure of paragraphs, sentences, or words and for genre analysis, and algorithmic thinking for creating drafting or editing protocols.

In the CW process, cognitive, creative, affective and pedagogical dimensions interact with each other, not operate independently. Barbot et al. (2012) listed six categories of CW 'ingredients' that interact in a writing process. First, general knowledge and cognition, which cover factors crucial for writing skills development (verbal intelligence, working memory, knowledge of topic and writing process, and cognitive skills). Second, creative cognition, which includes the ability to generate unique ideas (originality), selective combination, associative thinking, divergent thinking, and imagination. Third, motivational and conative factors, which cover intrinsic and extrinsic motivation, goal setting, perseverance, risk-taking, and tolerance for ambiguity. Fourth, executive functioning, or the skills of planning and organizing ideas. Fifth, linguistic and literacy factors. Finally, psychomotor factors, which is particularly relevant for young writers.

Grounded in these four dimensions, the present study's conceptual framework (Figure 1) visualizes CW learning as a dynamic interplay of cognitive, creative, affective, and pedagogical factors. Synthesizing the theories into a coherent foundation, it underpins the construction of the questionnaire employed in this study. While cognitive theories explain students' processing and internalization of writing techniques, creative pedagogy highlights the essence of divergent thinking and originality, affective aspects shows the vital influence of emotion and motivation that ultimately affect cognitive involvement, and pedagogical frameworks embed all dimensions into learning activity for ensuring that instruction addresses not only skills but also creative and affective needs. These illustrate that the four proposed domains are not distinct but interconnected.

Figure 1
Conceptual Framework of Four Domains Interrelation Shaping Students' Needs in CW Courses.



METHOD

Research Design

This study employed a sequential explanatory design (Creswell, 2018), where the qualitative data was collected first through observations. Then, a survey followed to collect quantitative data. In this study, the qualitative findings plays the primary role and the quantitative data serve as supportive evidence for contextualizing, and deepening the interpretation. The design was adopted to ensure comprehensive exploration that opens the ways to analyze the what, why, and how of the students' needs in EFL CW. The design also facilitates validity checks that would enhance the findings' credibility and trustworthiness through triangulation.

Participants

This study involved 40 students purposively selected by asking the partakers of CW course in the English Language Education study program of Universitas Kristen Indonesia Jakarta n the Even Semester of 2025/2026 Academic Year to participate. The participants, 31 females and 9 males, aged from 19 to 21 years, with pre-intermediate to intermediate English proficiency levels, came from various regions in Indonesia. Before joining the CW course, they had experienced paragraph and academic essay writing. Their selection aims at ensuring relevance to the focus of the study.

Instruments

Data was collected using two instruments. First, an observation sheet, which was created based on the literature review. Its design process followed the three steps proposed by DeMonbrun et al. (2015), i.e., crafting the instrument based on earlier validated instruments, developing an observation training protocol with the observers prior to the observations, and assigning an observer to focus on only one writing group. To ensure its reliability, the protocol's reliability was ensured by creating it in a structured checklist format conforming to the four domains.

The second instrument is a need analysis questionnaire, created following two frameworks: Hutchinson & Waters' (1987) structure, which highlights the necessities–lacks–wants model, and Papadopoulos' (2018) needs framework that outlines subjective and objective needs. It consists of 24 items of 5 Likert-scale (1 = strongly disagree to 5= strongly agree) closed-ended items and four open-ended questions. The closed-ended items, which cover the four domains needs (six items per domain), were adapted from Barbot et al.'s (2012) six broad categories of CW 'ingredients' The open-ended questions gauge insights related to CW writing experience, expected supportive CW activities, favored and challenging genres, and sources of inspiration. Effectiveness and accuracy were ensured through a pilot test and by writing all items and instructions bilingually (in English and Indonesian). Content validity was safeguarded through expert review by two writing instructors. Reliability was ensured by informing the participants of the study aims and asking them to express their opinions honestly.

Data Collection and Analysis

Data collection was conducted in two phases. First, collecting the qualitative data through three classroom observations. Second, collecting the quantitative data through an online questionnaire employing a Google Form to assess students' perceived needs in CW. Before implementation, a permission was asked from the chairperson of ELE. The observations were conducted while the students were doing key creative writing activities (brainstorming, planning, using peer feedback, drafting, and revising). Each session took place 90 minutes. Two non-participant observers (who had experienced joint observation training and pilot coding) coded the students behavior using the prepared checklist. On the checklist, the observers assessed and recorded the students' behaviors in a 5-point grading system and descriptive notes. The grading system moves from 1= minimal evidence, 2= emerging evidence, 3= developing evidence, 4= consistent evidence, and 5= exemplary evidence. Cohen's Kappa was administered to calculate agreement, which yielded values between 0.64 to 0.78, indicating substantial consistency.

Table 1
Class Interval of 5-point Scale/Score for Qualitative Interpretation

Interval	Behavioral Grade Interpretation	Perceived Need Interpretation
1.00 – 1.80	Minimal evidence (superficial or isolated behavior)	Very low level of agreement
1.81 – 2.60	Emerging evidence (partially implemented)	Low level of agreement
2.61 – 3.40	Developing evidence (moderate consistency, not yet stable)	Moderate level of agreement
3.41 – 4.20	Consistent evidence (regularly implemented)	High level of agreement
4.21 – 5.00	Exemplary evidence (implemented consistently and deeply)	Very high level of agreement

Thematic analysis was performed on the qualitative information gathered from the survey and the open-ended questions in the questionnaires. The observation data's trends and frequencies were tallied. Quantitative data analysis was conducted using descriptive statistics and a cluster analysis, which was performed to identify specific profiles concerning student needs. All qualitative and the quantitative findings were merged through joint display tables, and narrative integration to answer research questions comprehensively. The

observation grades and survey scales were interpreted using the class interval listed in Table 1.

Ethical Considerations

To ensure informed consent, an electronic approval form describing the study's objectives, procedures, benefits, and privacy measures was provided to the participants. They were free to quit at any time for the study was voluntary. Actual names were not used to keep things anonymous. All data was saved on an encrypted hard drive that only the researcher could access.

FINDINGS

In this section, findings are organized into four domains: cognitive, creative, affective, and pedagogical. Classroom observation findings are presented first in average rubric scores and evidence notes to generate themes, followed by survey findings in descriptive statistics. Selected qualitative responses are included to illustrate patterns. To facilitate comparison and save space, both qualitative and quantitative data from each domain are summarized in the same table.

Cognitive Processes

Classroom observations showed students' high engagement in using feedback and approval of peer and teacher input while writing (Score: 4.33), which reflects strong metacognitive awareness. Their planning behaviors were also evident. The students were observed to consistently use outlines and brainstorming sheets. Yet, their planning was still ineffective, as they often planned in a rush due to time limitations. In contrast, the students seemed to struggle with deep revision. They used to edit superficially with moderate consistency. Voice-related or structural edits were rare.

Table 2

Joint Display of Survey and Observation Results: Cognitive Processes

Construct	Observation Result		Survey Result	
	Rubric Score	Evidence	Mean (SD)	Responses to Open-Ended Questions
Idea generation practice	3.17	External prompts dependence, SCAMPER and reverse brainstorming were absent	3.78 (0.88)	Generating original and superb ideas is tough.
Knowledge in organizing ideas	3.5	Mind maps and bullet lists use	3.73 (0.75)	Often use mind maps or listings to organize ideas
Confidence in self-revision and editing	3	Mainly superficial changes	3.20 (1.04)	Often revise and edit works, but revising to make interesting sentences is difficult.
Planning stages practice	3,83	Outlines common but skipped under time constraint	3.78 (0.86)	Planning is essential but takes time
Ideation strategies knowledge	4	Brainstorming, reverse brainstorming, free writing	3.85 (0.98)	Ideation is necessary and conducted quite regularly
Practicing feedback use	4.33	Frequently combined peer and teacher feedback	4.28 (0.74)	Feedback offers different perspectives; positive feedback is motivating

As shown in Table 2. survey data support the observation findings. Practicing feedback use was rated the highest (M = 4.28). A student's remark to the open-ended questions clarifies this, "Feedback helps me see something from different perspectives." Another noted, "I found positive feedback motivating." In the class sessions, they frequently combined peer

and teacher feedback. The second highest self-rating is knowledge of ideation strategies (M = 3.85), which indicates metacognitive awareness. Yet, its implementation is rated moderate (M=3.30), indicating that the students possessed adequate skill but implemented it effortful as they relied on prompts which limits fluency. Self-revision confidence received the lowest self-rating (M = 3.20), showing students' high needs of this skill. A student noted, "I often edited and revised my manuscript. Yet, I found revising to create interesting sentences difficult."

Creative Engagement

Observation data disclosed students' relatively moderate level of creativity engagement. To generate novel idea, their brainstorming and free writing regularly relied on prompts or familiar themes, revealing originality constrains due to comfort zones. Their playful exercises behavior is scored high (3.5) as they consistently applied sensory prompts and 'what if' questions. Yet it was not effortlessly, and the results were not yet effective, indicating their hesitancy to create unique expressions. This concurs with their observed moderate confidence in putting originality in their works, indicating their low level of ambiguity tolerance.

Table 3

Joint Display of Survey and Observation Results: Creative Engagement

Construct	Observation Result		Survey Result	
	Rubric Score	Evidence	Mean (SD)	Responses to Open-Ended Questions
Novel idea generation	3.33	Reliance on prompts, rarely used 5W's + 1 H questions	3.46 (0.82)	Feel safer to write something familiar
Risk taking in writing	3.17	Figurative language occasional, prefer understandable dictions	3.50 (0.90)	Hesitant to use ambiguous expressions.
Experimenting with genres	3.33	Can generate various genres but not effortlessly	3.10 (1.01)	Favor short story writing; insecure to craft poetry
Originality confidence	3.17	Repetition of themes, minimum personal voice	3.35 (0.91)	Sometimes anxious to have different perspective from others
Expressive language use	2.83	Safe formats preferred	2.95 (0.88)	Hesitate to create fresh expressions for fearing making mistakes and incomprehensibility.
Liking playful exercises	3.5	Conducting sensory prompts and 'what if' questions	3.80 (0.91)	Fond of playful exercises, but hesitate to write in different perspectives.

As shown in Table 3, survey data revealed students' medium to lower-high levels of creativity involvement in CW activities. Fondness in playful exercise was rated the highest (M = 3.8). A student remarked, "Doing playful exercises is interesting, but writing in different perspective can make my work inconsistent." Risk taking in writing was self-rated the second highest (M = 3.5) but was scored moderate (3.17) in their observed confidence. Another student noted, "I often hesitate to use unique expressions. I'm afraid they violate English principles and my readers won't understand them." Expressive language use was rated the lowest (M = 2.95), indicating low ambiguity tolerance.

Affective Experiences

The survey results showed students' positive affective engagement towards CW. In terms of motivation and engagement, they were observed to have positive attitudes toward self-

chosen topic/style, publication prospect, and writing activity, particularly to write self-chosen topic or style. But they tended to feel anxious when they were assigned to provide peer-revision and felt insecure when receiving critical feedback.

Table 4
Joint Display of Survey and Observation Results: Affective Experiences

Construct	Observation Result		Survey Result	
	Rubric Score	Evidence	Mean (SD)	Responses to Open-Ended Questions
Anxiety to peer-revise	3.33	Some reluctance for draft revision	3.78 (1.03)	Struggle with substantive feedback provision
Confidence to write	3.5	active participation	3.48 (0.82)	Experience reduces writing anxiety
Self-chosen topic/style	4.17	Delight in self-chosen topics/styles	4.38 (0.82)	More motivated to write self-chosen topics or style
Motivation via publication	3.5	Publication prospect rises efforts.	4.50 (0.88)	Opportunity for publication motivates to write better
Criticism acceptance	3	Most welcome constructive criticism	2.38 (0.98)	Prefer to receive constructive feedback than critical one.
Motivation through feedback	4	Using feedback in revising	3.90 (0.93)	I feel more confident when my peers appreciate my ideas.

Table 4 reveals that the survey data supports students' high level rating of affectivity toward most CW activities. Motivation through publication (M = 4.5) is rated the highest, followed by excitement to write self-chosen topic/style (4.38). One student noted, "Opportunity for publication makes me exited." Another remarked, "I feel more excited to write the topic I choose." Two other high positive affective engagements are motivation through feedback and confidence to write. Yet, they also had negative attitudes, i.e., anxiety to provide peer-revision and insecurity when receiving criticism.

Pedagogical Practices and Resources

Observation findings disclose that for the students, CW is not only a process to generate creative works but also a learning process. The students started by writing, then exploring new words, syntax uses, details, and technical skills, and getting feedback to improve their drafts as well. Since CW in English was new for them, they encountered various challenges during the writing process. To address them, they got feedback, used digital tools, learnt practical concepts, applied writing stages, and corrected errors (problem solving). The last activity took up most of the learning time.

Table 5 demonstrates that survey results corroborate the observation findings. The very high self-rating for a systematic problem solving strategy (M = 4.53) and instructor's feedback (M = 4.28) reflect how they need both to meet the challenges in writing. The high rating for quality peer review skills (M= 4.13) indicates peer-review skills and effective protocols needs. They also realized the importance of digital tools (M=3.83) and reading mentor texts (M- 3.48). A student remarked, "I had written some short stories in Indonesian in high school, but crafting English short stories is more challenging." Another noted, "Digital tools help me in the process of writing a short story." Higher acceptance of instructor's feedback than peer feedback indicates the need for more practice to provide substantive feedback. In term of evaluation, instructor's assessment is considered more objective and reliable than peer evaluation due to the view that peers, unlike am instructor, may lack knowledge or familiarity with evaluation frameworks.

Table 5
Joint Display of Survey and Observation Results: Pedagogical Practices

Construct	Observation Result		Survey Result	
	Rubric Score	**Evidence**	**Mean (SD)**	**Responses to Open-Ended Questions**
Quality peer-review skills	3.17	55% of feedback specific/ actionable; rest superficial	4.13 (0.69)	Struggle to provide substantive feedback
Acceptance of instructor's feedback	4.17	All instructor feedback applied	4.28 (0.68)	Instructor input is more authoritative than peer feedback
Acceptance of peer feedback	3.33	Only about 60% of peer feedback applied; Require more practice in structured peer review	3.10 (1.01)	Peer feedback is less authoritative than instructor's feedback
Acceptance of instructor's evaluation	4.33	Instructor's evaluation is authoritative	4.28 (0.74)	Instructor is perceived as experts with objective knowledge and formal authority
Acceptance of peer evaluation	3.5	Only around 60% of the rubric's criteria applied confidently	4.13 (0.69)	Peers' limited knowledge made parts of their evaluation doubted
Growing genre-based knowledge via mentor texts	3.5	Reliance on discussions (55%) over mentor texts (45%)	3.48 (0.78)	Suggests value in integrating genre awareness with peer feedback
Planning/ revising with digital tools	3.83	70% of process via tools (Canva, Google Docs, Grammarly)	4 (0.59)	Found online writing tools helpful.
Expecting CW comprehensive but practical concepts	3.5	40% of discussion deals with concepts, 60% specific work cases	3.73 (0.96)	Inclination to problems first, concepts next.
Problem-solving skills need	3.83	50% of time spent on correcting errors (problem-solving)	4.53 (0.88)	Having systematic problem solving skills will be advantageous.

DISCUSSION

Cognitive Processes

Findings in cognitive domain observation and survey reveal areas of convergence—particularly in practicing feedback and planning—where self-perceptions are closely associated with observed behaviors. Practicing feedback appears to have the strongest convergence, designating students' strong metacognitive awareness. This supports Jiang et al.'s (2021) suggestion on decreasing cognitive load by providing feedback that is timely and relevant to students' understanding level and the learning material complexity. In this study, feedback was timely, aligned with the students' level of understanding, and relevant to the learning activity. Therefore, it facilitated strong metacognitive engagement, and students self-rated it highly.

Despite its strong convergence, planning was observed to spend too much time in practice. This indicates an excessive cognitive overload among the students while planning. It confirms Cognitive Load Theory hypothesizing the weakening of human working memory capacity while facing excessive cognitive load. (Paas & Sweller, 2012). To enable students to plan their writing assignment effectively, their excessive cognitive overload should be reduced. Koudsia (2024) suggests using visual tools (e.g., mind maps), offering clear assignment instructions, and creating a supportive environment for this.

The cognitive domain findings also expose divergences, i.e., in ideation and revision. Both are rated moderately confident, while class observations disclosed their reliance on outside prompts and surface level editing. This finding indicates the students' lower confidence in generating ideas and self-revision, which suggests cognitive strain while engaging in divergent thinking and substantive revision. This approves Blake et al.'s (2024)

finding of students frequent struggle with self-revision. To address such challenges, research suggests using metacognitive interventions such as constructive revision protocols and ideation frameworks (Sachar, 2020).

Creative Engagement

Creative domain findings show two divergent relationships, i.e., in novel idea generation, risk-taking in writing, and liking playful exercises. These highlight their awareness of how their reluctance and limited skills restrain their creative potential from full exploration, which confirms Amabile's (1988) concept underlining the importance of skills and intrinsic motivation for creativity, including ideation. Novel idea generation involves strategic searching, evaluating, and translating ideas to produce satisfactory writing, It is complex but could be developed by practicing various activities., such as group information exchange (Kohn et al., 2011), asking the 5W+1H questions, freewriting, and mind mapping. Moreover, since ideation involves originality, and pursuing originality can occasionally be risky, as it upsets routines and balances, ideation also includes risk-taking. To encourage students' risk-taking, implementing Beghetto's (2019) three actions, i.e., reconsidering what 'success' means, sharing "favorite failures" to avoid fear of failure, and practicing "possibility thinking" is worth considering.

Liking playful exercises convergence, which highlights students' self-awareness of their creative profile but require skill development, suggests the need to introduce divergent thinking exercises to transform their openness into sustained creative competence. To address this, applying Voice Writing Theory (Xiao, 2024) that cultivates students' unique voice, using personal and cultural narratives (Hanauer, 2012), and practicing literature hybridization activities (Alshhre, 2023) that help students create a unique and innovative literary form are recommended.

Affective Experiences

Affective domain findings show convergence in self-chosen topic/style, motivation through feedback, and confidence in writing. It indicates the students' possession of various forms of motivation in CW, including perceived autonomy, self-efficacy, and mastery goals (Syrewicz, 2023). Self-chosen topic/style is a perceived autonomy motivation, as it provided the students with decision-making flexibility. Students' high self-rating on this construct confirms Alzubi and Nazim's (2024) finding that writing on self-chosen topics increased students' intrinsic motivation, which in turn enhanced their writing in ideas and word choice. This finding also confirms Asri et al.'s (2022) finding revealing students' expectation to practice CW aligned with their interest. Motivation through feedback is a self-efficacy motivation because it led them to believe in their increasing capacity to generate better writings. Confidence in writing is a mastery goal motivation because it is driven by the students' desire to develop competence in CW. Although they initially found CW challenging and worrying, the more they practiced, the more motivated they were, as one student noted, "Experiences reduce my writing anxiety."

Two divergent patterns are identified in the affective domain findings: in anxiety in peer revision and in receiving criticism. This finding highlights students' awareness of the need to lessen anxiety and welcome criticism, but their inappropriate skills confine better actualization. This confirms Sternberg's (2006) Investment Theory of Creativity highlighting the importance of knowledge, skills, motivation, and personal decision to hone creativity. Students' anxiety was predominantly evident during peer revision tasks, where students feared critical evaluation due to their misperception that criticism is bad and were

apprehensive to provide substantial feedback due to low peer-review proficiency. To address the misperception of criticism, Alt et al. (2023) suggests instilling the belief that criticism (focusing on shortcomings of a work) can be more effective than positive feedback (targeting the strengths of a work) to improve writing. Anxiety in peer-reviewing could be addressed by using low-stakes revision activities and providing effective peer-review protocol.

Affective domain findings also show complementarity between the very high motivation through publication and the observed rises in effort after realizing the publication prospect. This indicates that self-perception and behavior strengthen each other, confirming Self-Determination Theory (Ryan & Deci, 2016), which affirms autonomy and relatedness as intrinsic motivation key drivers. Thus, integrating authentic publication venues, such as blogs or competitions, into rich, chosen tasks is recommended to promote both writing motivation and quality.

Comprehensively, affective dimension findings show that autonomy, recognition, and a free-fear learning environment drive students' engagement, while anxiety moderates their performance. This indicates the need for autonomy, authentic publication opportunities, and a safe learning environment.

Pedagogical Practices and Resources

The pedagogical domain findings show two divergences, while the rest constructs have convergent relationships. The first divergence emerges in the participants' very high ratings for problem-solving strategy need, while observations disclosed a significant occurrence of collaborative problem-solving processes, despite their lack of systematicity. In the writing process, the students drew on their imagination to communicate a topic in English. Since imaginations are influenced by personal experience and socio-cultural environment, and English is not their mother tongue, the writing process became so complex and problems were inevitable. The finding indicates the need to equip the students with effective problem-solving methods. To fulfill it, integrating computational thinking (CT) in to the course is recommended. Studies (e.g., Wu et al., 2024) showed that CT skills such as abstraction, logical reasoning, pattern recognition, debugging, algorithm design, and decomposition significantly enhanced students' CW performances.

The second divergence emerges in the students' high self-rated quality peer-review skills, while observations disclosed a significant amount of superficial feedback in their peer review. Similar to the finding on the students' anxiety in peer-reviewing in the affective domain, this finding confirms Sternberg's (2006) Investment Theory of Creativity, which highlights the importance of knowledge and skills in a creativity process. Equipping students with effective peer-review methods and protocols is recommended to address this problem.

One of the divergent relationships emerges in students' high self-rated planning and revising using digital tools, reflecting the impacts of digital technology that have revolutionized writing to be a process combined and overlapped with technological competence. This finding confirms Jasril and Asmawati's (2025) finding showing students' preference for using digital learning media in short story writing courses. Thus, to optimize students' performances, there is a need to expand hybrid-learning strategies.

Another divergent relationship emerges in the high self-rated genre-based knowledge development through mentor texts, though observations unveiled they slightly relied more on discussions than reading mentor texts. Since mentor texts are an effective scaffold to enhance students' understanding of metalinguistic awareness of language choices repertoire (Myhill et al., 2018), there is a need to integrate reading mentor texts with peer feedback to support genre awareness growth.

Overall, the pedagogical domain findings indicate that CW learning employs constructivist pedagogy, underlining the importance of offering support and encouraging learners' autonomy (Mascolo & Fischer, 2005), and aligns with Sociocultural Theory (Vygotsky, 1978), which suggests that collaborative learning can ignite creativity and facilitate new narrative generation. Also, CW learning resonates with the experiential learning model, characterized by learners' active participation in new experiences, knowledge linkage to specific moments, acceptance of risks as a vital learning journey component, exploration of real-world contexts, and attaining meaningful learning through critical reflection (Morris, 2020).

Figure 2

Integration Matrix: Convergence, Divergence, and Complementarity

Domain	Key Construct	Observation Pattern	Survey Pattern	Integration Type	Interpretation & Implication
Cognitive	Planning stages practice	Frequent application of prior comments	Very high (M = 3.78)	Convergence	Planning valued but vulnerable to time constraints; ensure planning stages are not trimmed by classroom constraints
	Idea generation practice	Reliance on prompts	Moderate High (M= 3.78)	Convergence	Adequate but effortful; scaffold divergent thinking strategies.
	Self-revision confidence	Mainly superficial edits	Moderate-low (M = 3.20)	Convergence	Require deeper revision training (organization, content, voice).
Creative	Risk-taking & immersion	Inclination to try new topics/styles and do playful exercises	High (M = 3.50 & 3.80)	Convergence	Encourage openness to stretch creative boundaries.
	Genre experimentation	Able but effortful	Low-moderate (M = 3.10)	Convergence	Increase exposure to diverse forms; model genre switching.
	Originality	Voice underdeveloped	Moderate (M = 3.35)	Convergence	Embed voice development in iterative tasks.
Affective	Autonomy	Greater engagement with self-chosen topics	Very high (M = 4.38)	Divergence	Preserve choice to sustain motivation.
	Motivation through publication	Higher engagement when publication possible	Very high (M = 4.50)	Compliment-arity	Integrate authentic audiences into coursework.
Pedagogical	Problem-solving skills need	Significant collaborative problem-solving	Very high (M = 4.53)	Divergence	Integrate CT into CW pedagogy.
	Digital tools	Used in ~70% of process	Moderate-high (M= 3.83)	Convergence	Expand hybrid-learning strategies.

Figure 2 visualizes the relationship of cognitive, creative, affective, and pedagogical constructs in terms of convergence, divergence and complementarity using color-coding so show their priorities, patterns, and pedagogical implications. In the figure, convergence (green) denotes the students' strengths to sustain (e.g., creative openness, reflective habits, and use of digital tools), divergence (red) indicates the tensions to resolve (including conditional autonomy and unacknowledged problem-solving), and complementarity (blue) specifies mutually supporting factors (such as motivation through publication).

Across domains, the integration matrix exposes three patterns shaping students' overall experience. Convergence is identified in planning, because both survey and observation approved regular use of brainstorming and outlines. Divergence emerged in revision, because survey informed students' confidence but observation verified only superficial edits. Affective and pedagogical domains shows complementarity, where survey data underscored how authentic audiences promoted motivation, while observations showed that peer feedback mediated cognitive–creative synergies.

To sum up, these patterns suggest that students' CW experience is shaped by mechanisms of reinforcement (e.g., convergent planning supports creativity), constraint (e.g., divergent revision limits cognitive depth), and mediation (the complementary affective–pedagogical supports enables risk taking). The integration matrix thus provides a structured way to interpret how domains interact, showing that learner readiness is not a static profile but a dynamic interplay of strategies, dispositions, and scaffolds. Pedagogically, this underscores the necessity of treatments that concurrently activate several domains, like embedding revision protocols (cognitive) into authentic publication tasks (affective) that are supported by peer feedback (pedagogical).

Conclusion

In this case study, classroom observations and surveys were used to explore EFL students' cognitive, creative, emotional, and pedagogical needs in a CW course at Universitas Kristen Indonesia. Findings show strengths—metacognitive awareness and motivation linked to publication opportunities—and challenges in divergent thinking and substantial revision. These domains interact each other through the learning strategies, scaffolds, and dispositions. Consequently, Students' readiness for CW is not static profile but is determined by the dynamic interaction of strategies, scaffolds, and dispositions. Instructional strategies, therefore, should include interventions that simultaneously stimulate multiple domains.

This study contributes to the existing knowledge of undergraduate EFL students' needs required in effective CW instructional designs. The results imply the necessity for designing more targeted CW instructions. Educators need to integrate explicit planning and revision strategies into creative tasks, structure exercises to promote divergent thinking, and improve peer feedback protocols to complement instructor guidance. Policymakers are suggested to encourage institutions to establish avenues that facilitate publication of students' works and incorporate CT principles into teacher training programs to improve problem solving in CW instruction. However, limitations of the study must be taken into account: the small sample size (N = 40) makes the quantitative findings' generalizability limited, and the absence of factor analysis makes the validation of the survey instrument dimensions limited. Considering these limitations, the study is regarded as an exploratory case study in nature. Instead of aiming for broad generalizations, its primary contribution lies in the inclusive profiling of EFL students' needs. Regarding this, future research is recommended to involve larger, more diverse samples and longitudinal designs to confirm whether the identified relationships in this study remain over time and across different contexts.

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