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Reinterpreting Learning Preferences through Deep Learning Practices in Indonesian Senior High School English Classrooms

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Abstract

Background:
In Indonesian senior high school English classrooms, English learning is increasingly expected to involve interpretation, reflection, and sustained engagement rather than simple recall. Yet many students still use learning style labels to explain difficulty, participation, and their own sense of fit with particular tasks, despite the limited scientific support for such claims. This study explores how students draw on that language to interpret challenge and learner positioning in deep learning-oriented classrooms across culturally diverse regions of Indonesia.
Methodology:
Using a qualitative interpretive design, this study drew on classroom observations, in-depth interviews, and reflective learning artifacts from twenty-five purposively selected senior high school students across five Indonesian provinces representing diverse sociocultural contexts. The qualitative data were analysed through reflexive thematic analysis, with attention to both site-specific meanings and patterns across provinces.
Findings:
Learning style labels did not appear to represent fixed cognitive ability. Instead, students often used them to explain why certain analytical tasks felt difficult or uncomfortable Through sustained participation in scaffolded deep learning activities, many students revised earlier self-perceptions that had cast them as 'not analytical,' not suited' to long texts, or weak in writing. This revision was evident when interview accounts and classroom observations showed students moving from style-based explanations of difficulty toward more flexible interpretations grounded in practice, guidance, peer interaction, and increased confidence. Differences across contexts were also visible, particularly in whether students described difficulty in terms of anxiety, restraint, dialogic support, perseverance, or intellectual challenge.
Conclusion:
Students' engagement in deep learning seems to depend less on perceived learning-style fit than on how they interpret difficulty in relation to themselves as learners The findings indicate that teaching could beneficially combine cognitive support with identity-sensitive scaffolding, flexible strategy use, and the normalization of intellectual struggle.
Originality:
Across multiple Indonesian contexts, the originality of this study lies in reframing learning-style discourse from a presumed cognitive typology into a socially and culturally mediated interpretive resource that students use to negotiate difficulty, participation, and learner identity in deep learning contexts.

Keywords	:	Deep learning pedagogy; learning style discourse; Learner identity; Qualitative inquiry; Indonesian EFL context; Sociocultural variation
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INTRODUCTION

Over the past several years, expectations for English teaching in Indonesian secondary schools have shifted. Policy discourse increasingly emphasizes critical thinking, authentic tasks, student participation, and the ability to move beyond routine comprehension toward interpretation, comparison, and reasoned response. In this context, English learning is expected to involve sustained engagement, reflection, and meaning making rather than simple recall, which aligns with broader discussions of deep learning in education (Agyeman, 2024; Dai & Sihes, 2023). Yet policy direction does not automatically transform classroom practice. In many schools, teaching is still shaped by examination pressure, limited time, and the demand to complete syllabus content. As a result, tasks requiring extended interpretation and analytical response may remain unfamiliar or demanding for students.

At the same time, research has not yet sufficiently explained how students in Indonesian senior high school English classrooms interpret these deeper learning demands through the language they use about themselves as learners. Existing studies often discuss deep learning, learning styles, and learner identity separately, although in classroom practice they are tightly connected: deep learning introduces cognitive and emotional challenge, learning-style discourse provides a language for interpreting that challenge, and learner identity is shaped through the ways students use that language to position themselves in relation to participation, difficulty, and competence. What remains less visible is how these strands come together in actual classroom experience, especially when students encounter analytical reading, reflective discussion, or extended writing that challenges familiar routines (Matsumura et al., 2023; Norhasanah et al., 2022).

During preliminary classroom visits conducted to refine the focus of this study, students rarely described demanding English tasks in purely academic terms. Instead, they often used everyday expressions such as “too heavy,” “not used to thinking like that,” or “not my style.” This observation is treated here as a preliminary field insight that helped shape the study rationale rather than as a formal finding. It suggested that, even though the scientific basis of learning styles has been widely questioned, the language of learning styles continues to circulate in classroom life because it gives students a familiar way to talk about difficulty, hesitation, and uneven participation (Clinton-Lisell & Litzinger, 2024; Newton & Salvi, 2020; Zrudlo, 2023).

A sociocultural view of learner identity helps explain why this discourse still matters. Students do not talk about difficulty as though it exists outside classroom life. The words they choose are shaped by interaction, by local expectations about participation, and by shared ideas about what learners should do when they feel unsure. Because of that, a comment such as "this is not my style" may say more than it first appears to. It can be a way of expressing discomfort, protecting self-worth, or finding a socially acceptable position in relation to challenge and support. From this perspective, learning-style discourse is more usefully understood as identity talk than as a valid cognitive classification (McPhee, 2020; Norton, 2006; Sommerville, 2016).

However, this issue remains underexplored in the literature. Research on deep learning in EFL settings has largely focused on pedagogy, higher-order thinking, and assessment design, while research on learning styles has often centered on whether instruction should match student preference or on critiques of that assumption (Clinton-Lisell & Litzinger, 2024; Norhasanah et al., 2022). Studies of learner identity offer useful conceptual insight, but identity is often discussed in broad terms rather than through students' own accounts of how they interpret difficulty during demanding classroom tasks (Ali & Hadi, 2022). As a result, we still know relatively little about how students themselves use learning-style language to make sense of deep learning-oriented English instruction.

This difference is particularly significant in Indonesia. A lot of the research on Indonesian EFL still originates from studies done at one site, mainly in metropolitan schools in Java. Students from other provinces are still less evident in the literature (Gultom & Ashadi, 2024; Hasbi, 2025; Sajjad, 2025; Saragih et al., 2024). The problem is not just that Indonesia is different. Also, not all students talk about difficulty, participation, or challenge in the same manner. When things get tough in class, individuals react in a certain way because of the way people in their area talk to each other. If deep learning requires students to tolerate ambiguity, substantiate their ideas, and endure challenging tasks, it is essential to comprehend how these experiences are perceived in various circumstances.

For that reason, this study adopts a multi-regional Indonesian perspective involving students from West Java, Central Java, South Sulawesi, West Sumatra, and East Nusa Tenggara. The purpose is not to treat these provinces as fixed cultural types or to claim national representation. Rather, the multi-regional frame is used to examine how students in different sociocultural settings describe challenge, participation, and perceived learning preferences while engaging in deep learning-oriented English classrooms. In this study, provincial context is treated as part of how learning is experienced and narrated, not merely as background information.

Accordingly, this study explores how Indonesian senior high school students experience deep learning-oriented English instruction and how they draw on perceived learning preferences to make sense of those experiences. It proceeds from the assumption that learning-style discourse should not be treated as an objective classification of cognitive ability, but as a

meaning-making resource through which students interpret themselves as learners in specific classroom and sociocultural contexts (Kettani & Ouahidi, 2025; Zrudlo, 2023).

The study is guided by the following overarching research question: How do Indonesian senior high school students across different provinces experience deep learning-oriented English instruction, and how do they use perceived learning preferences to make sense of these experiences?

This central question is elaborated through four subsidiary questions:

1. How do students describe their engagement, challenges, and strategies during deep learning tasks?
2. How do learning-style narratives shape or reflect their responses to those tasks?
3. How do regional sociocultural contexts influence the construction of these narratives?
4. What implications do these interpretations hold for the design of deep learning environments in Indonesian secondary schools?

LITERATURE REVIEW

The intellectual landscape surrounding learning processes in contemporary education has changed considerably in the last decade, and the discourse on how learners engage with cognitively demanding tasks increasingly draws from interdisciplinary perspectives. Two theoretical constructs learning styles and deep learning occupy a central place in these discussions, though they function in markedly different ways. Learning styles emerged in the late twentieth century as a framework proposing that individuals possess stable cognitive preferences that should guide the design of instruction. Deep learning, by contrast, is a pedagogical and cognitive paradigm that focuses on meaningful understanding, integration of concepts, and the capacity to apply knowledge flexibly (Agyeman, 2024; Dai & Sihes, 2023). These paradigms have been treated separately in the literature, yet their convergence in real classrooms produces tensions that require careful theoretical and empirical scrutiny. For the present research, understanding these constructs not as competing theories but as intersecting discourses is essential.

Learning styles have often been described as relatively stable ways of processing information, usually grouped into categories such as visual, auditory, or kinesthetic. Older approaches assumed that students would learn better when teaching matched these preferred modes. That view has been questioned quite strongly in recent research. Studies have shown that learning-style instruments have weak construct validity and that there is little evidence that matching instruction to preferred modalities leads to better learning outcomes (Deng & Yifan, 2022; Clinton-Lisell & Litzinger, 2024). Some experimental findings even suggest that such matching may be unhelpful in learning environments that require flexibility and sustained reasoning (Lyle et al., 2023). For the present study, however, the more important question is

not whether learning styles remain scientifically defensible, but why this language still carries meaning in classroom life. In deep learning-oriented English classrooms, students may turn to learning-style labels less to describe fixed cognitive traits than to explain why certain tasks feel difficult, unfamiliar, or uncomfortable. Seen in this way, learning-style discourse may be read less as a scientific category than as a form of identity talk through which learners position themselves in relation to challenge, participation, and support.

In classroom settings, learning-style labels may do more than describe how learners think. They may also offer a familiar way to talk about difficulty, comfort, and participation. Seen from this angle, such labels work less as scientific categories than as a form of identity talk. Newton and Salvi (2020) suggest that learning styles persist partly because they are intuitively appealing and remain embedded in educational discourse. Enhances this argument by framing learning-style language not only as a neutral description of cognition but also as a mechanism utilized by learners to decipher classroom expectations and their respective roles within them (Zrudlo, 2023). Students' concept of "style" may be more intricately linked to confidence, prior experiences, or culturally shaped expectations regarding the emotional dimensions of learning, rather than enduring cognitive disparities.

Deep learning takes a very different route. It encourages students to do more than just remember facts; it encourages them to think about them, connect ideas, and keep reasoning. In EFL classes, this usually shows up in homework that makes students read texts, compare points of view, explain their answers, and use what they learned in situations they aren't used to (Zhang, 2020; Silistraru & Vetrila, 2023; Peng, 2025). These tasks can help people understand more, but they can also make it easier to tell when someone is having trouble. When students meet these needs, they might use words that describe how they learn to explain why a task feels uncomfortable, new, or not like the kind of work they usually do. Statements such as being "visual," "not analytical," or "not suited" for particular tasks may reflect students' perceptions of difficulty and their self-identification as learners when confronted with challenging work, rather than fixed cognitive limitations (SwarSuri, 2024; Li, 2025; Maranna et al., 2022).

This is very important in Indonesian schools. Students from different areas may have different ideas about what it means to be challenged, hesitant, or involved, and these differences are not just personal. Local sociocultural norms influence students' classroom discourse, their responses to challenges, and their behaviors as learners. Expectations regarding respect, self-expression, classroom discourse, and appropriate responses to ambiguity do not function consistently across various contexts. This means that language students may also use different words to talk about how they feel about deep learning tasks, whether they are uncomfortable or confident. Students may also be extra careful about what they say and how they say it in other situations so they don't sound rude or boastful. People might feel more at ease expressing their thoughts, posing inquiries, or admitting their lack of knowledge in certain situations. Ashencaen Crabtree (2010) says that cultural patterns in a region can affect how ready students are to have open-ended conversations and ask critical questions. Ndofirepi et al. (2023) show

that students often talk about their successes and failures in terms of locally defined ideas of effort, respect, and academic identity. So, "learning-style speaking" might not mean the same thing in every province. It may instead illustrate alternative sociocultural approaches to problem-solving, engagement, and identifying one's role as a learner.

Previous research has primarily focused on deep learning, learning styles, and learner identity in isolation, rarely examining their intersections within multi-regional Indonesian classrooms. The majority of research on learning styles has focused on cognitive assessment or critiques of neuromyths. Investigations into deep learning have predominantly emphasized pedagogy and metacognition, whereas inquiries into identity have centered on sociocultural positioning. As a result, there is a limited understanding of how Indonesian students employ learning-style language to address challenges and participate in English classes centered on deep learning across diverse provincial contexts. The difference is even more important because most of the research that is out there still comes from urban schools in Java, which makes kids from other areas less visible. This study fills that gap by doing a qualitative study across several provinces on how deep learning pedagogy, learning-style narratives, and learner identity all come together in students' classroom experiences.

METHODOLOGY

Research Design

This study employed a qualitative interpretive design to examine how Indonesian senior high school students experienced deep learning-oriented English instruction and how they used learning style language to interpret challenge, participation, and difficulty. A qualitative approach was considered appropriate because the study was concerned with meaning-making, learner self-positioning, and the situated interpretation of classroom experience rather than with measuring predetermined variables. The study also adopted a multi provincial design in order to explore how similar pedagogical demands were experienced across different sociocultural contexts in Indonesia. In this study, provincial diversity was not treated as a basis for broad cultural generalisation, but as an analytical frame for examining variation in how students described learning, discomfort, and engagement.

Participants

The study involved 25 Grade XI students from five public senior high schools in West Java, Central Java, South Sulawesi, West Sumatra, and East Nusa Tenggara. These provinces were selected purposively to provide variation in sociocultural and educational context, not to represent fixed cultural types. West Java and Central Java were included in the study to allow for a comparison within Java, the area most often studied in Indonesian EFL research. This approach also considered differences in classroom interaction, the language environment, and how students express themselves.

South Sulawesi, West Sumatra, and East Nusa Tenggara were selected to extend the study beyond Java and to examine how students in different regional contexts described challenge, participation, confidence, and persistence in deep learning oriented English tasks. Taken together, these sites were expected to provide contrasting accounts of how demanding classroom work was interpreted and how learning-style language was used across contexts.

Participants were chosen purposively, not randomly, because the study was concerned with interpretive depth rather than statistical representation. Selection in each school was carried out in consultation with the English teacher, with the aim of including students who differed in participation, academic performance, and confidence in English learning. This helped ensure that the sample included students who could speak from different positions when describing challenge, hesitation, and engagement in deep learning-oriented tasks. For anonymity, each participant was given a code: WJ-01 to WJ-05, CJ-01 to CJ-05, SS-01 to SS-05, WS-01 to WS-05, and NT-01 to NT-05. These codes were used consistently in the transcripts, field notes, and analytic memos.

The dataset was considered sufficient when patterns started to recur within each site and when comparison across sites showed both common themes and meaningful differences, without requiring the creation of substantially new analytic categories. In other words, adequacy was judged by whether the material was rich enough to support interpretation within each site and comparison across provinces.

Data Collection

Data were collected through three complementary methods: classroom observations, semi-structured interviews, and learner artifacts. The use of multiple sources was intended to capture not only what students said about their learning experiences, but also how those experiences appeared in classroom interaction and documented work.

Classroom observations were conducted across the five research sites during English lessons that included deep learning-oriented tasks. Each site was observed twice, with each session running for about 90 minutes. During these observations, the researcher focused on what students actually did when tasks became demanding: when they hesitated, how they expressed difficulty, how they interacted with peers, and whether they referred to their own learning preferences. The same observation guide was used in all sites so that patterns could be compared across provinces.

Classroom Observations

Classroom observations were conducted during English lessons in which participating teachers introduced deep learning-oriented tasks, including argumentative reading, analytical writing, reflective discussion, and interpretive response. Across the five sites, the researcher remained in a non-participant observer role and used the same observation guide. Two observations were completed at each site, with each session lasting about 90 minutes. The

observations focused on how students responded when tasks became demanding, especially in moments of hesitation, expressions of difficulty, peer interaction, and explicit or implicit references to perceived learning styles. Field notes recorded both verbal and non-verbal cues so that students' responses could be interpreted within the immediate classroom context. Using a common observation guide across sites also made comparison across provinces more consistent.

Semi-Structured Interviews

Interviews formed the core of the study because they allowed participants to articulate the meanings they attached to their learning experiences. Each student participated in a semi-structured interview lasting approximately 40 to 60 minutes. The interview guide was designed to elicit data in three related areas: (1) how students experienced challenge during deep learning tasks, (2) how they described their perceived learning preferences, and (3) how they positioned themselves as learners when facing demanding classroom activities. Students were invited to discuss tasks they found engaging or difficult, to explain why certain activities felt more or less manageable, and to reflect on moments in which they felt successful, uncertain, hesitant, or misaligned with classroom expectations. The semi-structured format allowed the researcher to probe emergent themes while maintaining consistency across participants.

Learner Artifacts

In addition to observations and interviews, students were invited to share learner artifacts such as reflective journals, written responses to reading tasks, and project-based assignments. These materials were not treated as standalone evidence but as supporting data that helped illuminate how students enacted, revised, or narrated their learning strategies when working with conceptually demanding tasks. They also served a triangulation function by allowing the researcher to compare interview claims with documented classroom work.

Data Analysis

The data were analysed through a reflexive thematic approach grounded in an interpretive perspective and adapted for cross-site comparison. The process began with verbatim transcription of all interviews, followed by repeated reading of the transcripts, observation notes, and learner artifacts to develop close familiarity with the dataset as a whole. Initial coding was carried out inductively, with attention to how students talked about perceived learning preferences, emotional responses to deep learning tasks, and their sense of themselves as learners. Particular attention was given to moments where students described alignment or misalignment between task demands and perceived preference, as well as to expressions of hesitation, self efficacy, persistence, and intellectual autonomy. These initial codes were then reviewed repeatedly and grouped step by step into broader interpretive categories that captured

both recurring patterns across the dataset and forms of variation that appeared more strongly in particular contexts.

Because the study involved multiple provinces, cross case comparison became an important part of the analysis. Once thematic patterns had been developed within each site, the researcher compared areas of convergence and divergence across provinces. This made it possible to distinguish themes that were more widely shared from those that appeared to be more context specific. The analytic process remained recursive rather than strictly linear, as insights from cross-site comparison sometimes led to earlier coding decisions being reconsidered and thematic boundaries being refined. To avoid overgeneralisation, province-level differences were interpreted as contextual tendencies within this sample rather than as fixed cultural traits.

Trustworthiness and Ethical Considerations

To support the credibility of the analysis, follow-up feedback sessions were held with selected participants after the preliminary themes had been identified. During these sessions, participants were provided with brief thematic summaries written in accessible language and focused on challenge, perceived learning preferences, and learner self-positioning. They were then invited to confirm, clarify, or question these summaries in light of their own classroom experiences. Their feedback was used to refine the wording of several themes and to sharpen their boundaries where needed.

Peer debriefing was also undertaken with colleagues experienced in qualitative educational research. These colleagues reviewed selected excerpts from the data together with the developing thematic structure and raised questions about interpretations that appeared too broad, weakly grounded, or at risk of overgeneralisation across sites. Their input helped strengthen the final interpretation by prompting further clarification, revision, and, in some cases, the merging of themes related to hesitation, participation, and contextual variation.

FINDINGS

The findings show that students used learning style discourse mainly to explain discomfort, hesitation, and learner self-positioning in deep learning tasks. Across the five Indonesian provinces, this discourse did not operate as a set of fixed cognitive categories. Instead, students drew on it to make sense of challenge, participation, and their shifting engagement with demanding classroom work. Although several shared patterns appeared across sites, the way this discourse was expressed varied across cultural and regional contexts.

Learning style Discourse as a Response to Cognitive Discomfort

Across the provinces, a recurring pattern was that students used learning-style terminology to make sense of difficulty in deep learning tasks rather than to describe fixed cognitive traits. This tendency appeared particularly noticeable among several participants in West Java, who were more forthcoming in expressing feelings of being overwhelmed by interpretive or analytical activities.

WJ01 described her reaction to argumentative reading tasks:

> "I think I'm more of a visual learner, Miss. When I have to read long texts and find the arguments, everything feels mixed up in my head. Maybe it's just not my style."

Her comment followed an observation session in which she successfully identified claim–evidence structures during a group discussion, suggesting that her use of "style" indexed emotional discomfort rather than actual limitation.

Similarly, WJ02 framed his hesitation in terms of personal identity:

> "Deep analysis feels like it belongs to students who enjoy thinking abstractly. I learn better step by step. Maybe that's just who I am."

Among several participants in Central Java, similar sentiments were also evident, although in this dataset they were often expressed more cautiously and with greater restraint. These patterns are treated as contextual tendencies within the sample rather than as fixed characteristics of the region as a whole.

WJ03 (Central Java) explained:

> "I feel safer when there are concrete examples. Long texts with hidden meanings make me afraid of being wrong. Maybe it's not that I can't do it… maybe I'm just not used to it."

Her emphasis on *fear of being wrong* reflects a culturally shaped preference for cautious participation, where learning style discourse allows students to save face while acknowledging difficulty.

Deep Learning as a Catalyst for Identity Shifts

As students engaged more deeply with analytical tasks, many began to renegotiate the identities they once tied to learning style labels. Deep learning thus emerged as not only a cognitive process but also an identity-transforming experience.

Among several participants in South Sulawesi, deep learning tasks were more often described as intellectually enabling rather than threatening. These accounts are treated here as a contextual tendency within the sample, not as a fixed characteristic of the region as a whole.

SS01 (South Sulawesi) remarked:

> "When we discuss the text together, ideas become clearer for me. I used to say I'm an auditory learner, but maybe it's more about how my brain works when I can argue and respond."

Here, He reframed his "style" from a sensory modality into a socio-cognitive preference for dialogic reasoning.

SS02 (South Sulawesi) shared a narrative of personal transformation:

> "Before, I thought academic texts were too difficult for me. But after the teacher guided us step by step, I realized I can understand them. It's not really about style. It's about practice."

These types of reflections show that sustained engagement in deep learning tasks has the potential to reshape learners' beliefs about their capabilities.

Among several participants in West Sumatra, learning-style labels appeared less central in explaining difficulty and participation, and many were more inclined to move beyond them when reflecting on demanding classroom tasks. These responses are treated here as a contextual pattern within the sample rather than as a fixed characteristic of the region as a whole.

WS 01 (West Sumatra) explained:

> "Text analysis makes me excited. I like challenging arguments. I don't think learning style matters for this. Deep learning fits the way I think."

For him, deep learning was not a disruption but a validation of his existing intellectual identity.

Cultural Variation in Approaching Cognitive Challenge

While some themes cut across the data set, clear differences emerged in how students from each province framed their cognitive struggles.

In East Nusa Tenggara, for example, students often described difficulty with humility, emphasizing effort and respect for teachers rather than preference or identity.

ENT 01 (East Nusa Tenggara) reflected:

> "Sometimes I feel slow when the English texts are difficult, but I still try. The teacher says thinking deeply will help us later. I don't know if I have a style… I just try my best."

She explained a pattern where "trying one's best" replaces preference talk, signaling a learning ethic grounded in perseverance rather than cognitive self-classification. In contrast, West Sumatran students articulated difficulty through analytical vocabulary, suggesting greater familiarity with argumentative norms.

WS03 (West Sumatra) observed:

> "Deep learning pushes us to justify everything. Maybe that's why some students say they prefer certain styles because justification is hard, and style feels like a safer explanation."

Her insight shows metacognitive awareness that learning style discourse can serve as a shield against the risk inherent in intellectually demanding tasks. Meanwhile, in Central Java, students framed learning style claims as polite indirect requests for assistance.

CJ01 (Central Java) stated:

> "Writing long arguments makes me feel unsure. When I say I prefer visuals, it's my way of asking the teacher to guide me more."

Here, learning style labels function as a culturally acceptable mechanism for requesting scaffolding.

Mismatches Between Claimed Styles and Demonstrated Abilities

Classroom observations often showed a gap between what students said about their learning preferences and what they were actually able to do when tasks became demanding. Some students who claimed that certain activities did not fit their learning style still took part actively, persisted when the work became difficult, or completed the task successfully. Similar cases have appeared in several provinces. This points to a more flexible use of learning-style discourse than students' first descriptions might suggest. In many cases, it seemed to reflect emotion and learner self-positioning more than fixed cognitive capacity. One example came from WJ04 (West Java). He initially said that long texts were difficult for him to process, yet during peer discussion he was able to compare two editorials in a nuanced way. When asked about this apparent inconsistency, he reflected:

> "When my friends explain, I suddenly get it. Maybe I'm a social learner now? Maybe learning style is not fixed".

Another case emerged in East Nusa Tenggara, where ENT04 who initially described himself as a "kinesthetic learner" produced a highly coherent reflective essay after participating in a structured textual analysis activity. He later commented:

> "I always thought writing wasn't my strength. But when we broke the text into parts, it made sense. Maybe my style isn't the real problem."

These observations substantiate the idea that learning preferences are situational narratives rather than hardwired characteristics.

Learning Styles as Identity Discourse in Cross Province

Taken together, the findings illustrate that learning style discourse in Indonesian secondary classrooms cannot be understood as a cognitive classification system. Instead, students deploy it as a flexible identity tool that helps them navigate emotional, cultural, and intellectual demands.

Table 1. Dominant Contextual Tendencies in the Meanings of Learning-Style Discourse Across Five Indonesian Provinces

Province	Dominant Tendency in This Dataset	Interpretation Note
West Java	Learning-style terminology was more often used to express academic anxiety and feelings of being overwhelmed by demanding tasks.	This appeared as a recurring pattern among many participants, not as a fixed regional trait.
Central Java	Learning-style language more often functioned as a polite hedge or a restrained way of expressing difficulty.	In this dataset, several participants framed challenge cautiously, often with greater restraint.
South Sulawesi	Some participants described learning-style discourse in more social-interactive terms and viewed demanding tasks as intellectually enabling rather than threatening.	The pattern is therefore treated as a contextual tendency within this sample rather than as evidence of a broad cultural fact.
West Sumatra	Learning style labels appeared less central in many participants' accounts of difficulty and participation.	Several participants appeared more willing to move beyond such labels when reflecting on demanding classroom tasks.
East Nusa Tenggara	Learning style terminology appeared less prominent than narratives of perseverance, effort, and respect.	In this dataset, students more often framed challenge in terms of persistence than through style-based explanation.

Table 1. shows that the same learning-style terminology did not carry identical meanings across contexts. The patterns presented here should be understood as dominant tendencies within this dataset rather than as fixed regional profiles.

Deep learning acted as a catalyst for reinterpreting these narratives. As students engaged in tasks that required justification, synthesis, and conceptual integration, many began to revise their earlier self-descriptions. Some abandoned learning style terms entirely; others transformed them into more nuanced accounts of their thinking processes; others retained them but with modified meanings.

Crucially, across provinces, students demonstrated abilities that exceeded the limitations implied by their self-described styles suggesting that learning style discourse expresses affective experience rather than cognitive potential.

DISCUSSION

Students often used learning-style discourse to talk about discomfort, hesitation, and how they positioned themselves when facing deep learning tasks. This suggests that engagement was shaped not only by task difficulty, but also by the meaning students gave to that difficulty in relation to themselves as learners. In these classrooms, demanding English tasks were rarely felt as purely cognitive demands. More often, they came with uncertainty, caution, or emotional strain, especially when students had to analyse texts, justify interpretations, and sustain reasoning. This echoes earlier work showing that deep learning

usually involves ambiguity, reflection, and cognitive struggle before deeper understanding can emerge (Li, 2025; McGregor, 2020). What becomes more visible here is that students did not simply go through that struggle; they also interpreted it through the language they used to make sense of themselves as learners.

This also helps explain why learning-style discourse continued to matter even though its empirical basis has been widely questioned. In line with current critiques, labels such as visual, auditory, or practical did not appear in this study as stable descriptions of cognitive ability (Lyle et al., 2023; Newton & Salvi, 2020). Instead, students used this language in more practical and relational ways: to explain why a task felt difficult, to express hesitation, to ask for support indirectly, or to reduce the risk of appearing to fail. In that sense, the analysis supports the view that learning-style language is socially meaningful rather than cognitively definitive (Brown, 2006; Kolb et al., 2014). At times, it assisted them in circumventing risk. At other instances, it provided them with a means to navigate uncertainty or to reevaluate prior assumptions regarding their identities as learners. Instead of indicating consistent cognitive disparities, discussions on learning styles frequently appeared to reflect emotional reactions and learner perspectives.

This is also closely related to learner identity. Previous research has indicated the significance of identity in language acquisition; nevertheless, it has inadequately addressed the manner in which students employ learning-style language when confronting challenging classroom activities (Javadi & Tahmasbi, 2020; Norton, 2006; Soozandehfar & Sahragard, 2015). This dataset illustrates that such speech frequently served as a mechanism for students to negotiate self-esteem, classroom legitimacy, and preparedness for participation. Its significance, however, was not uniform across contexts. The cross-provincial analysis indicates that students utilized this language in manners influenced by regional interaction norms, caution, confidence, and academic self-expression. These trends are more accurately perceived as contextual tendencies within this sample rather than as immutable characteristics of entire regions. Nonetheless, they indicate a more comprehensive conclusion: learner identity in deep learning contexts is influenced not solely by cognition or personal inclination, but also by the social and contextual factors surrounding involvement.

When considered in conjunction with prior scholarship, this elucidates the study's significance. Investigations into deep learning within English as a Foreign Language (EFL) contexts have predominantly emphasized pedagogy, metacognition, and instructional design (Dai & Sihes, 2023; He & Ma, 2025), whereas research on learning styles has primarily concentrated on the legitimacy of aligning instruction with individual preferences (Lyle et al., 2023; Newton & Salvi, 2020). Identity-centric research has emphasized sociocultural positioning while largely neglecting the discourse on learning styles within that framework (Javadi & Tahmasbi, 2020; Norton, 2006). The objective is not to invalidate those avenues of inquiry. The objective is to establish a tighter connection by demonstrating how students in deep learning-focused English classes utilize learning-style language to comprehend challenge,

participation, and self-positioning concurrently. The study enhances current scholarship by integrating subjects that are frequently addressed in isolation. It helped them reduce risk at times. At other times, it gave them a way to deal with ambiguity or to rethink what they thought they knew about themselves as learners. This statement is harder to ignore because there was a pattern of students saying what they wanted and then not being able to execute it in class. Instead of showing persistent differences in how people think, talks about learning styles often seemed to show how people feel and how they see things.

This is also quite similar to who the learner is. Previous research has indicated that identity plays a significant role in language acquisition; however, there has been little focus on how students employ learning-style language when confronted with challenging classroom assignments (Javadi & Tahmasbi, 2020; Norton, 2006; Soozandehfar & Sahragard, 2015). In this dataset, this kind of talk typically helped students figure out their self-worth, how legitimate the classroom was, and whether they were ready to join in. But its importance varied depending on the situation. The comparative examination across many provinces demonstrates that students utilized this language in ways shaped by regional interaction norms, caution, confidence, and academic self-expression. These patterns are more accurately interpreted as contextual tendencies within this sample rather than as immutable characteristics of entire regions. Nonetheless, results indicate a more comprehensive conclusion: learner identity in deep learning contexts is influenced not just by cognitive factors or individual predispositions but also by the social and contextual conditions of involvement.

When seen alongside previous research, this clarifies the study's importance. Research on deep learning in EFL contexts has mainly focused on pedagogy, metacognition, and instructional design (Dai & Sihes, 2023; He & Ma, 2025), while studies on learning styles have primarily examined the validity of tailoring instruction to individual preferences (Lyle et al., 2023; Newton & Salvi, 2020). Identity-focused research has emphasized sociocultural positioning, often neglecting the discourse on learning styles within that framework (Javadi & Tahmasbi, 2020; Norton, 2006). The objective is not to invalidate certain research trajectories. It aims to establish a closer connection by illustrating how students in English classrooms focused on deep learning utilize learning-style language to comprehend challenge, participation, and self-positioning concurrently. In this regard, the study enhances current scholarship by linking domains that are frequently examined in isolation.

This study contributes to literature in three important ways. First, the findings support a theoretical reframing of learning style discourse by showing that students do not simply use it as a fixed cognitive classification, but rather as a dynamic, identity-based, and culturally mediated interpretive resource. In this sense, the study aligns with recent critiques of learning styles while extending them through evidence that students' references to preferred ways of learning are closely tied to self-perception, classroom positioning, and sociocultural context. Second, the study offers an empirical contribution by providing, to the best of our knowledge, the first multi-provincial qualitative analysis of Indonesian students' deep learning

experiences. This broader contextual coverage reveals how learning preferences, identity, and culture intersect in shaping how students respond to cognitively demanding tasks. Third, the findings generate a pedagogical insight that has received limited attention in previous research, namely the importance of identity scaffolding in the implementation of deep learning. Rather than focusing only on task design or cognitive challenge, the results suggest that teachers also need to support how students interpret themselves as learners, particularly when they encounter difficulty, uncertainty, or forms of classroom participation that feel unfamiliar.These contributions collectively exhibit a distinct innovation, specifically the amalgamation of learning style discourse, deep learning pedagogy, and sociocultural identity across several Indonesian regions, an analytical framework not previously investigated in earlier works.

CONCLUSION

Conceptually, the study argues that learning-style discourse should be understood not as evidence of fixed cognitive preference, but as a socially and culturally mediated identity resource through which students interpret difficulty, negotiate participation, and position themselves in relation to demanding learning. In this sense, learning-style labels did not function as fixed indicators of cognitive ability, but as a way of making sense of challenge and participation in demanding classroom work.

Responses to deep learning were shaped not only by task design, but also by how students interpreted difficulty in relation to their learner identity. As students engaged in scaffolded activities, many began to revise earlier style-based assumptions and respond to challenge in more flexible ways.

These findings extend the literature by showing that learning-style discourse functions less as a cognitive classification than as a socially mediated resource for learner self-interpretation, which in turn suggests that deep learning is best sustained through identity-sensitive scaffolding rather than fixed learner labelling.

DECLARATION OF GENERATIVE AI

During the preparation of this manuscript, the authors used AI-assisted tools, including ChatGPT, Grammarly, and QuillBot, to support language editing and improve grammatical accuracy. The authors carefully reviewed and edited the output generated by these tools and take full responsibility for the content of the manuscript.

REFERENCES

Agyeman, N. Y. B. (2024). Deep learning in high schools: Exploring pedagogical approaches for transformative education. *Humanika: Kajian Ilmiah Mata Kuliah Umum*, *24*(2), 111–126. https://doi.org/10.21831/hum.v24i2.71350

Ali, S. E., & Hadi, A. (2022). Dual Identity Or Identity Duel: Efl Context Duality Force On Identity Aspects Formation Through Learners'self-Reflection. *Journal of Language and Education*, *8*(1 (29)), 130–147.

Ashencaen Crabtree, S. (2010). Engaging students from the United Arab Emirates in culturally responsive education. *Innovations in Education and Teaching International*, *47*(1), 85–94. https://doi.org/10.1080/14703290903525929

Balpande, M., Patil, S., Rana, G., Ranalkar, V., Shaikh, A., & Badjate, S. (2024). Deepfake Detection System using Deep Learning Algorithms. *2024 8th International Conference on Computing, Communication, Control and Automation (ICCUBEA)*, 1–5. https://ieeexplore.ieee.org/abstract/document/10774743/

Brown, B. A. (2006). "It isn't no slang that can be said about this stuff": Language, identity, and appropriating science discourse. *Journal of Research in Science Teaching*, *43*(1), 96–126. https://doi.org/10.1002/tea.20096

Clinton-Lisell, V., & Litzinger, C. (2024). Is it really a neuromyth? A meta-analysis of the learning styles matching hypothesis. *Frontiers in Psychology*, *15*, 1428732.

Dai, L., & Sihes, A. B. (2023). Deep learning in EFL education in China: Definition and dimensions. *International Journal of Academic Research in Business and Social Sciences*, *13*(11). https://kwpublications.com/papers_submitted/7663/deep-learning-in-efl-education-in-china-definition-and-dimensions.pdf

Deng. R, B., & Yifan, G. (2022). *Limited usefulness of learning style instruments in advancing teaching and learning—UQ eSpace*. https://espace.library.uq.edu.au/view/UQ:585d496

Gultom, A. M., & Ashadi, A. (2024). Translanguaging in Multilingual Context: Graduate Students' Voices From Yogyakarta, Indonesia. *ISSN: 2189-101X – The Asian Conference on Education & International Development 2024 Official Conference Proceedings*, 135–147.

Gümüş Mantu, P. (2023). *Redefining the Political. Youth Experiences of Collective Action in Turkey*. Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-40565-6

Hasbi, M. (2025). *Navigating Teaching, Research, and Community Service: Tridharma Practices for English Lecturers*. IAIN SALATIGA. https://www.researchgate.net/profile/Muhamad-Hasbi-3/publication/398370612_Navigating_Teaching_Research_and_Community_Service_T

ridharma_Practices_for_English_Lecturers/links/6932e36b27359023a0098538/Navigating-Teaching-Research-and-Community-Service-Tridharma-Practices-for-English-Lecturers.pdf

He, J., & Ma, T. (2025). *Deep learning-oriented pedagogy in secondary English classrooms: A review of recent developments—Google Search*. https://www.tandfonline.com/doi/abs/10.1080/14703297.2025.2569510

Heidari, A., Jafari Navimipour, N., Dag, H., & Unal, M. (2024). Deepfake detection using deep learning methods: A systematic and comprehensive review. *WIREs Data Mining and Knowledge Discovery*, *14*(2), e1520. https://doi.org/10.1002/widm.1520

Javadi, Y., & Tahmasbi, M. (2020). Application of sociocultural identity theory to education in EFL textbooks development. *Theory and Practice in Language Studies*, *10*(5), 536–541.

Kettani, M. T., & Ouahidi, L. M. (2025). Interactions between Classroom Discourse and Cultural Identities. *International Journal of Language and Literary Studies*, *7*(1), 87–107.

Khumukcham, B. (2024). *Unraveling The Essence Of Motivation In Language Learning | ShodhKosh: Journal of Visual and Performing Arts*. https://www.granthaalayahpublication.org/Arts-Journal/ShodhKosh/article/view/3043

Kolb, D. A. (2007). *The Kolb learning style inventory*. Hay Resources Direct Boston, MA. https://www.researchgate.net/profile/David-Kolb-2/publication/303446688_The_Kolb_Learning_Style_Inventory_40_Guide_to_Theory_Psychometrics_Research_Applications/links/57437c4c08ae9f741b3a1a58/The-Kolb-Learning-Style-Inventory-40-Guide-to-Theory-Psychometrics-Research-Applications.pdf

Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2014). Experiential learning theory: Previous research and new directions. In *Perspectives on thinking, learning, and cognitive styles* (pp. 227–247). Routledge. https://api.taylorfrancis.com/content/chapters/edit/download?identifierName=doi&identifierValue=10.4324/9781410605986-9&type=chapterpdf

Li, W. (2025). The Current Status of Empirical Research on Deep learning within the Educational Domain. *International Journal of Education and Humanities*, *18*(1), 106–110.

Lyle, K. B., Young, A. S., Heyden, R. J., & McDaniel, M. A. (2023). Matching learning style to instructional format penalizes learning. *Computers and Education Open*, *5*, 100143.

Maranna, S., Willison, J., Joksimovic, S., Parange, N., & Costabile, M. (2022). Factors that influence cognitive presence: A scoping review. *Australasian Journal of Educational Technology*, *38*(4), 95–111.

Matsumura, L. C., Wang, E. L., Correnti, R., & Litman, D. (2023). Tasks and feedback: An exploration of students' opportunity to develop adaptive expertise for analytic text-based writing. *Assessing Writing*, *55*, 100689.

McGregor, S. L. (2020). Emerging from the deep: Complexity, emergent pedagogy and deep learning. *Northeast Journal of Complex Systems (NEJCS)*, *2*(1), 2.

McPhee, S. (2020). Cultural learning preferences, blended learning, and the. *Digital Experiences of International Students: Challenging Assumptions and Rethinking Engagement*, 106.

Ndofirepi, E. S., Moosa, R., Reed, M. J., & Maodzwa-Taruvinga, M. (2023). Perceived life balance, cultural experience, and academic outcomes: A comparative study of first-generation students in South Africa and Canada. *Scholarship of Teaching and Learning in the South*, *7*(2), 21–45.

Newton, P. M., & Salvi, A. (2020). How common is belief in the learning styles neuromyth, and does it matter? A pragmatic systematic review. *Frontiers in Education*, *5*, 602451. https://www.frontiersin.org/journals/education/articles/10.3389/feduc.2020.602451/full?trk=public_post_comment-text

Norhasanah, N., Yusuf, F. N., & Suherdi, D. (2022). Efl Learners'preferences And Perspectives On Learning Styles. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, *6*(2), 382–399.

Norton, B. (2006). Identity as a sociocultural construct in second language research. *TESOL in Context [Special Issue]*, 22–33.

Peng, C. (2025). Monitoring the Invisible: Metacognitive Monitoring Strategies Uncover Hidden Barriers in EFL Deep Reading. *Cognitive Strategies in Study*, *1*(2), 1–9.

Sajjad, M. (2025). Building the future: Comparative perspectives on ECE curriculum, access, and quality in Pakistan and Indonesia. *Journal of Childhood Literacy and Societal Issues*, *4*(2), 1–19.

Saragih, E., Sinaga, N. T., Rumapea, E. L. B., Sipayung, R. W., Tarigan, S. N., & Daulay, I. K. (2024). Constructing Research Preferences by Prospective Indonesian EFL Teachers. *Journal of Language Teaching and Research*, *15*(4), 1351–1360.

Silistraru, N., & Vetrila, S. (2023). *Metacognition as a component of intelligent behavior. Vector European, 2, 124–128*.

Sommerville, T. (2016). Language of Learning: Policy, Personal Preference, and Professional Identity. *Alternation Journal*, *23*(1), 158–179.

Soozandehfar, S. M. A., & Sahragard, R. (2015). Sociocultural identity development scaffolded by collaboration-conducive strategies: A case of an Iranian EFL writing class. *Journal of English Language Teaching and Learning*, *7*(15), 125–156.

SwarSuri, S. (2024). Teachers' Strategies to Enhance Deeper Learning Skills in English Language Classes. *International Journal of Linguistics, Literature & Translation*, *7*(3). https://openurl.ebsco.com/EPDB%3Agcd%3A8%3A33064248/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A177530117&crl=c&link_origin=scholar.google.com

Veenman, M. V. J., Prins, F. J., & Verheij, J. (2003). Learning styles: Self-reports versus thinking-aloud measures. *British Journal of Educational Psychology*, *73*(3), 357–372. https://doi.org/10.1348/000709903322275885

Zhang, Y. (2020). Developing EFL students' critical thinking competence in English reading class. *Creative Education*, *11*(07), 1145.

Zrudlo, I. (2023). Why the learning styles myth appeals and how to persuade believers otherwise. *Teaching and Teacher Education*, *132*, 104266.