Critical Discourse Analysis of Higher-Order Thinking Skills Representation in Indonesian Teacher Training Modules

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Abstract

The development of Higher Order Thinking Skills is essential for fostering critical thinking and problem-solving abilities among teachers and pre-service teachers in Indonesia's Teacher Professional Education Program. This study explores how HOTS are represented in three core modules of PPG: Principles of Teaching and Assessment, Curriculum Design and Development, and Computational Thinking. This study employs Fairclough's model of Critical Discourse Analysis to analyse fifteen purposively selected instructional texts from the PPG modules.

The analysis was conducted across three dimensions: textual, discursive practice, and social practice. The results indicate a complex tension in HOTS representation. Textually, HOTS are explicitly promoted through imperative structures (e.g., "analyse," "evaluate") that encourage cognitive engagement. However, the analysis of discursive practice reveals a 'technocratic reduction,' where complex cognitive theories are simplified into procedural administrative tasks. Furthermore, regarding social practice, the modules construct a form of 'controlled professionalism.' While teachers are framed as active agents, their autonomy is constrained by rigid, monologic instructions that lack the dialogic space found in international benchmarks. Unlike global trends that emphasize sustained reflection and formative flexibility, the Indonesian modules prioritize standardized compliance. This study suggests that for PPG to be truly transformative, the curriculum must move beyond technical imperatives to embrace critical pedagogy and genuine professional autonomy.

Keywords:

Higher Order Thinking Skills;
Teacher Professional Education;
Critical Discourse Analysis;
Teacher Professional Identity;
Educational Ideology.

1. Introduction

The global transformation of education in the 21st century has triggered a paradigm shift in the perception of the role of education and teaching practices in the classroom. Education is no longer viewed as a mere process of knowledge transmission, but rather as an empowering process that encourages students to become critical, reflective, and adaptive thinkers. In an increasingly complex and uncertain educational landscape, Higher Order Thinking Skills have emerged as essential competencies that must be developed across all levels of education. HOTS encompass the abilities to analyse, evaluate, create, and reflect skills essential for decision-making, problem-solving, and generating innovative and contextually relevant solutions (Anderson & Krathwohl, 2001).

Within this context, the role of the teacher has been redefined. Teachers are no longer just conveyors of information, but facilitators capable of designing learning experiences that stimulate exploration, reflection, and collaboration. Consequently, teacher education and training must systematically and strategically integrate HOTS, including through carefully designed instruction, activities, and assessments that explicitly cultivate higher-order cognitive (Beauchamp et al., 2020).

In Indonesia, the *Teacher Professional Education Program* represents a strategic government initiative aimed at building the professional capacity of future teachers. As the final stage in the teacher certification process, PPG plays a crucial role in preparing educators to meet the challenges of 21st-century classrooms. Aligned with the implementation of the *Merdeka Curriculum*, which emphasises differentiated instruction, project-based learning, and character formation through the Profil Pelajar Pancasila, the integration of HOTS into the PPG program has become increasingly urgent. This curriculum requires teachers to design learning processes that are reflective, participatory, and deeply connected to students' social and cultural realities.

However, significant challenges remain in implementing teacher training in Indonesia, particularly regarding the limitations of the pedagogical approaches employed. Many teacher training modules continue to prioritise procedural, rote-based methods with limited exploration of HOTS in an explicit manner. A study by Faradella et al. (2024) revealed that teachers often struggle to implement HOTS oriented instruction due to limited exposure to reflective pedagogy during training. Additionally, research conducted by Sanata Dharma University (2024) highlighted geographical disparities in teacher training, with regions in Eastern Indonesia facing significant access and quality barriers that directly impact teachers' capacity to integrate HOTS into classroom practices.

International studies further demonstrate that integrating HOTS in teacher education requires a transformative and reflective approach. Zohar & Barzilai (2013) emphasised that HOTS development must involve active engagement, critical dialogue, and instructional design that supports meaningful learning. Likewise, Mat et al. (2025) and Ragab et al. (2024) recommended curriculum and assessment designs that encourage teachers to think creatively and evaluatively, while also connecting instructional content to students' sociocultural contexts.

However, to date, most studies remain limited to the evaluation of HOTS implementation through quantitative or descriptive lenses. Few have explored how the language of teacher training modules as discursive and ideological products constructs representations of HOTS, professional teacher identity, and the expected cognitive structures. In response, this study proposes the use of *Critical Discourse Analysis*, particularly Fairclough's three dimensional model (1995, 2003), as a conceptual framework to uncover the hidden meanings embedded within educational texts. This model enables the examination of linguistic structures (textual dimension), the processes of text production and consumption (discursive practice), and the educational values and ideologies (social practice) associated with instructional content.

Against this background, the present study aims to analyse how HOTS are represented in three core PPG modules: *Principles of Teaching and Assessment*, *Curriculum Design and Development*, and *Computational Thinking*. The analysis is intended to critically investigate how instructional texts within these modules frame the expectations of teachers as reflective, contextual, and transformative pedagogical agents of the 21st century.

Higher Order Thinking Skills have become a fundamental cornerstone in global education reform, particularly in efforts to enhance the quality of human resources capable of facing 21st-century challenges. HOTS encompass the abilities to analyse, evaluate, and create based on deep understanding, requiring the activation of metacognitive strategies, reflective thinking, and evidence-based decision-making (Anderson & Krathwohl, 2001). These competencies are considered essential prerequisites for shaping professional teachers who can facilitate meaningful and contextual learning in the classroom.

Various international studies have shown that integrating HOTS into teacher training significantly enhances pre-service teachers' capacity for critical, innovative, and empathetic thinking. Ulu Kalin & Kumandaş Öztürk (2024)found that teacher training programs that explicitly incorporate HOTS can foster sustained reflective thinking and promote creativity in designing responsive learning experiences. This suggests that HOTS serve not only as cognitive tools but also as a medium for developing professional identity and teaching ethics.

In the Indonesian context, the integration of HOTS into teacher training still faces systemic challenges. Nurhayani and Retnowati (2022) argue that school based assessments designed using HOTS principles can improve teachers' instructional planning and learning strategies. Furthermore, research by Zain et al. (2022) suggests that collaborative approaches, such as flipped classrooms and project-based learning, enhance pre service teachers' abilities in reflection, collaboration, and creativity. Nevertheless, most studies in Indonesia tend to focus on the implementation or evaluative aspects of

HOTS, and have yet to examine how these skills are discursively constructed through language and discourse in teacher training texts.

Language within instructional texts plays a strategic role in shaping how pre service teachers think and act. The linguistic representation of HOTS is not merely about the choice of higher order verbs but also about how the text positions the learner as a subject and articulates institutional expectations of professional teaching practice. Beauchamp et al. (2020) emphasise that explicit instructions based on higher order verbs such as "analyse", "compare", and "reflect" act as triggers for reflective and evaluative engagement in learning. These instructions are not merely technical in nature; they also carry ideological dimensions that construct the image of teachers as critical, independent, and reflective individuals.

Research by Aziz and Rawian (2022) supports this view, showing that instructional designs that prioritise HOTS integration have a positive impact on metacognitive awareness and reflective participation among pre service teachers. However, there remains a lack of systematic research analysing how HOTS are represented in instructional texts. Particularly in developing countries, studies on teacher education discourse tend to focus on curriculum outcomes or program effectiveness, rather than on how language within texts implies particular ideological values.

To address this gap, Critical Discourse Analysis offers a robust methodological alternative. Fairclough (1995, 2003) developed a CDA framework composed of three key dimensions: (1) textual dimension (linguistic and lexical structures), (2) discursive practice (processes of text production and consumption), and (3) social practice (the construction of ideology and power in society). This approach not only attempts to understand what is said in a text, but also how and why it is said within a specific social context. CDA thus enables deeper analysis of the interrelations between language, knowledge, and power in education.

Previous studies have employed CDA to examine various educational issues, including gender and sexuality representation in instructional modules (Zainudin et al., 2023), nationalist narratives in history textbooks (Rashid & Rahman, 2020), and the construction of professional teacher identities within national curricula (Darwis et al., 2024). However, the application of CDA to teacher training modules in Indonesia remains relatively rare, especially in systematically exploring the ideological dimensions behind HOTS representations.

Research on the representation of HOTS in teacher education remains limited, particularly about discourse analysis that explores how language shapes professional identity and educational ideology. Most prior studies focus on content or program effectiveness without examining the role of language in framing teachers as reflective and transformative actors.

This study addresses that gap by applying Fairclough's Critical Discourse Analysis model to three core PPG modules in Indonesia. Beyond analysing operational verbs in the text, this study examines how linguistic and discursive structures shape pedagogical meaning, social positioning, and professional expectations for teachers.

Theoretically, this study contributes to the expansion of CDA application in the context of teacher education in the Global South, where ideological exploration remains limited. Practically, it offers insights for curriculum designers and policymakers to develop more critical and contextualised teacher training. Previous studies by Rihatmi et al. (2024) and Harsaid et al. (2024) have shown that language in educational materials helps shape student identity; however, few have examined this dimension within the context of teacher training and HOTS. Accordingly, this research offers both conceptual and practical contributions to the critical education discourse at national and global levels.

2. Method

This study adopts a qualitative approach grounded in the critical constructivist paradigm, which views language not merely as a neutral representation but as a medium through which social reality is constructed. Within this framework, Critical Discourse Analysis serves as the primary method for examining how educational texts construct and reproduce ideological meaning. CDA enables researchers to interpret texts not only linguistically, but also in relation to power structures, professional identity, and broader educational policy discourses. As an interpretive approach, CDA requires the researcher's reflective engagement in analysing discourse structures and the ideological values embedded within linguistic constructions (Wodak, 2001).

The CDA model employed in this study is based on Norman Fairclough's three-dimensional framework (1995, 2003), which includes: (1) textual analysis, encompassing diction, modality, and sentence structure; (2) discursive practice analysis, examining the processes of text production and consumption; and (3) social practice analysis, which connects texts to power structures and ideological values in society. This model has been widely applied in critical educational studies to uncover the hidden construction of meaning in pedagogical texts. The operationalisation of these analytical stages is further clarified by Scribbr (2023), which simplifies CDA procedures into lexical analysis, intertextuality, and the examination of power structures. The framework is also supported by multimodal and intertextual principles as emphasised by Machin and Mayr (2012), who argue that texts are never free from broader social structures.

The context of this study is the Indonesian Teacher Professional Education Program, administered by the Ministry of Education, Culture, Research, and Technology. PPG constitutes a core component of teacher certification, aiming to foster comprehensive professional competence. Three core modules were analysed: *Principles of Teaching and Assessment*, *Curriculum Design and Development*, and *Computational Thinking*. These modules were purposively selected for their relevance to HOTS development and their alignment with the transformative values embedded in the national curriculum.

Data collection was carried out in two stages: initial skim reading to obtain an overview of the module content, followed by close reading to identify instructional statements that reflect HOTS. Relevant instructions were coded according to five categories: (1) instruction excerpts; (2) HOTS keywords; (3) sentence subject; (4) modality type (imperative, declarative, reflective); and (5) pedagogical meaning or intention. Criterion-based sampling was employed to select sentences that explicitly represent HOTS, referencing high-order cognitive indicators as outlined by Durmuşoğlu Saltalı et al. (2022). One example of an analysed instruction is: "Analyse *the learning outcomes in your school's curriculum and reflect on their alignment with students' needs."* This sentence was analysed lexically for its imperative form and its ideological intentionality.

At the analysis stage, the textual dimension was examined to identify the linguistic structure of the instructions, including modality, sentence forms, and subject positioning. For instance, imperative verbs such as *"analyse," "design," and "evaluate" were analysed* to determine the extent to which the instructions promote higher-order cognitive processes. The discursive practice dimension examined how texts were produced and consumed by educational actors, including facilitators, module developers, and PPG participants. At this level, attention was given to the social positions and discursive relations between policy authors and educational practitioners.

The social practice dimension focused on identifying the ideological values embedded in the texts, such as constructivism, self-reflection, digital literacy, and 21st century professionalism. Additionally, the analysis examined whether the texts reproduce expectations of teachers as transformative agents in society. Thus, the analysis went beyond cognitive content to explore the educational ideologies institutionalised within the instructional texts.

All coding processes were conducted independently by two researchers to enhance objectivity and consistency. Coding results were compared through discussion to reach a consensus on interpretation. The validity of findings was strengthened through data triangulation across the three modules and cross-dimensional comparisons. Furthermore, tools such as Excel spreadsheets were used to manage coding data and facilitate tracking of intertextual relationships.

Although this study did not involve human participants, ethical considerations were still observed. Since it was based on publicly available documents, no formal ethical approval was required. Nonetheless, principles of source transparency, intellectual attribution, and caution against institutional bias in discourse interpretation were upheld (Feilchenfeld et al. 2017). The researchers had no affiliation with the module authors and declared no conflict of interest that would affect the integrity of the analysis.

By systematically applying Fairclough's CDA model, this study seeks not only to uncover the explicit representations of higher order thinking skills in instructional texts but also to interpret the social positioning of teachers, the construction of professional identity, and the ideological values institutionalised through language. This approach offers a robust theoretical and methodological foundation for analysing paradigm shifts in teacher education, particularly within the context of developing countries.

3. Results and Discussion

3.1 Results

This section presents the key findings from the analysis of Higher-Order Thinking Skills representation in three core modules of Indonesia's Teacher Professional Education Program : (1) *Principles of Teaching and Assessment*, (2) *Curriculum Design and Development*, and (3) *Computational Thinking*. This study applies Norman Fairclough's three dimensional Critical Discourse Analysis, which includes textual analysis, discursive practice, and social practice. This approach enables a comprehensive exploration of not only the linguistic structures of instructional texts but also the construction of meaning, social positioning, and embedded ideological values.

A total of 15 instructional statements from the three modules were analysed and coded based on high order cognitive verbs related to analysing, evaluating, creating, and reflecting, following the revised Bloom's Taxonomy (Anderson & Krathwohl, 2001). The analysis combined both quantitative (distributional patterns) and qualitative (meaning and discourse structure) perspectives.

In general, the instructional statements in all three modules utilise explicit imperative sentence structures that demand active responses from learners namely, pre service teachers. Instructions such as *"design formative assessments,"* *"analyse algorithms,"* or *"evaluate the use of instructional technology"* are clear examples of high-order operational verbs that prompt reflective, analytical, and evaluative engagement.

Table 1. Example of HOTS Coding in PPG Modules

No	Module	Instruction Excerpt	HOTS Keywords	Modality	Instructional Meaning
1	**Principles of Teaching and Assessment**	Design formative assessments that measure students' analytical thinking skills.	design, analytical	Imperative	Encourages teachers to think critically and reflectively
2	**Curriculum Design and Development**	Students evaluate the alignment between learning outcomes and activities.	evaluate, alignment	Imperative	Develops evaluative capacity toward curriculum
3	**Computational Thinking**	Analyse simple algorithms to solve contextual problems.	analyse, algorithm, contextual	Imperative	Trains systematic analysis and problem-solving skills

These examples indicate that the PPG modules explicitly integrate HOTS elements through the use of instructional commands rooted in high-order operational verbs. Instructions such as *"design,"* *"evaluate,"* and *"analyse" not only direct learners to process information but also promote active cognitive engagement in designing, assessing, and solving problems in reflective and contextualised* ways. Such representation demonstrates a systematic effort to position future teachers as critical learners capable of internalising and applying HOTS principles in professional contexts.

The distribution of HOTS representations across modules reveals variation in the cognitive emphasis embedded within each module. Quantitative analysis shows that the distribution of HOTS instructions is not evenly spread across the three modules. The table below compares the number of identified HOTS based instructions:

Table 2. Distribution of HOTS Instructions by Module

Module	Number of HOTS Instructions
Principles of Teaching and Assessment	3
Curriculum Design and Development	6
Computational Thinking	6

The data indicate that the Curriculum Design and Development and Computational Thinking modules incorporate relatively more HOTS based instructions than the Principles of Teaching and Assessment module. This imbalance suggests that the emphasis on higher order thinking development is not uniformly embedded throughout the training content, indicating the need for further review to ensure consistency in HOTS integration across all modules.

Discourse analysis was conducted through three dimensions: text, discursive practice, and social practice. The findings illustrate how HOTS instructions reflect power relations, professional identity, and underlying ideological values. The following table provides examples of analysis across the three dimensions:

Table 3. Example of Fairclough's Three Dimensional Analysis

Instruction Excerpt	Textual Dimension	Discursive Practice	Social Practice
Design formative assessments that measure students' analytical thinking skills.	Imperative verb: design	Teacher as reflective assessment designer	Strengthening teacher professionalism through reflection
Students compare concepts presented by other groups.	Evaluative verb: compare	Student as evaluator in academic discussion	Promotes collaborative and dialogic academic culture
Evaluate the use of technology in CT-based instruction.	Evaluative verb: evaluate	Student as edutech user and critic	Digital literacy and reinforcement of critical pedagogy

From the textual perspective, the linguistic structure is dominated by high order operational verbs with imperative modality, highlighting HOTS representation at the surface level. From the discursive practice dimension, the texts construct professional roles for both teachers and students as reflective thinkers and transformative agents. At the social practice level, the texts imply progressive pedagogical values such as constructivism, self-reflection, collaboration, and digital literacy though some of these values remain implicit and are not fully developed across the instructional design.

1. Prevalence of Explicit Imperative Structures: Most instructions are constructed using direct commands based on HOTS-related operational verbs. This indicates that HOTS representation is explicit and consistent throughout the modules. Commands such as "analyse," "design," and "evaluate" not only define learning tasks but also position students as active agents in the construction of knowledge.
2. Limited Dialogic and Collaborative Representation: Although many instructions encourage individual reflection and analysis, few promote dialogic or peer-based learning. Instructions rarely connect HOTS with collaborative practices such as peer review, debate, or shared reflection. This highlights a gap in the social dimension of HOTS within the instructional design.
3. Gaps in Socio Critical Dimension: The analysis shows that most instructions associate HOTS with technical or pedagogical skills such as assessment and curriculum analysis, but they are rarely linked to broader social values such as social justice, professional ethics, or local and multicultural contexts. The instructions fall short of addressing transformative issues central to 21st-century teacher education.

These findings suggest that although HOTS representation in PPG modules is relatively strong in cognitive and technical terms, there remains significant room to enhance the socio critical dimension of HOTS. This includes fostering ideological awareness, promoting social justice orientation, and engaging with community contexts. Ideally, teacher training modules should not only produce reflective and analytical educators, but also socially aware and transformative professionals.

Explicit integration of critical pedagogy principles, collaborative methods, and local-contextual relevance will be essential to make PPG modules more responsive to the future challenges of Indonesian education. Furthermore, the development of HOTS should not be limited to the use of imperative verbs, but also be embodied through dialogic, contextual, and socially reflective activity structures.

3.2 Discussion

The findings of this study indicate that Higher-Order Thinking Skills are explicitly represented in the three core modules of the Indonesian Teacher Professional Education Program through the use of high order cognitive operational verbs such as *design*, *analyse*, *evaluate*, and *reflect*. These instructions are conveyed in strong imperative sentence structures that systematically position pre service teachers as active agents and reflective thinkers in the learning process. This representation suggests that HOTS are not only included as terminology but are framed as pedagogical imperatives to be fulfilled by teacher trainees.

Within Fairclough's (1995) textual dimension, the language forms used in the modules exhibit a consistent linguistic pattern: the use of high-modality, active-voice imperative sentences with declarative clarity. This demonstrates that module authors construct instructional narratives with the intention of establishing pedagogical authority and clarity in expectations. The verbs used align predominantly with the higher levels of Bloom's revised taxonomy (Anderson & Krathwohl, 2001), particularly in the domains of analysis, evaluation, and creation. Demands such as *"design formative assessments,"* *"analyse summative assessment results,"* or *"evaluate the use of technology in instruction"* indicate that the instructions not only promote conceptual understanding but also foster reflective skill and evidence based decision-making.

Interestingly, the use of imperative form in these texts serves a dual function. On one hand, it activates cognitive directives that stimulate complex information processing; on the other hand, it represents a top-down power relation whereby readers (i.e., PPG participants) are explicitly directed to follow a predefined pedagogical narrative. This highlights that the instructional texts are not neutral, but rather constructed by underlying educational ideologies. Thus, PPG modules function not only as technical learning instruments but also as *metadidactic tools* that cultivate awareness of one's own thinking processes (metacognition).

In the discursive practice dimension, the instructions create a distinctive configuration of roles. The modules tend to position teachers as professional actors responsible for designing complex learning experiences. Yet, this positioning is paradoxical. On one hand, teachers are framed as 'agents'; on the other, the monologic nature of the text which lacks spaces for debate or alternative interpretations limits their agency. The absence of explicit dialogic activities aligns with Davis et al. (2014) critique, arguing that many teacher education programs fail to develop dialogic teaching strategies. Consequently, the discursive practice reflects a 'top-down' transmission model rather than a socio constructivist exchange, limiting the pre service teachers' ability to negotiate the meaning of HOTS within their own local contexts.

The absence of explicit dialogic activities such as group discussions, pedagogical debates, or argumentative simulations is a notable limitation. This aligns with Davis et al. (2014) critique, which argues that many teacher education programs fail to develop dialogic teaching strategies, despite these strategies being foundational for fostering advanced critical thinking. In this context, although HOTS instructions appear linguistically, their presentation does not fully align with the principles of social constructivism, which emphasise the importance of meaning-making through learning communities.

From the social practice dimension, the representation of HOTS reflects core 21st-century educational values, including digital literacy and learner autonomy. For example, in the *Computational Thinking* module, HOTS is directly linked to problem-solving skills. Nevertheless, the ideological construction of the 'professional teacher' in these modules warrants critical scrutiny. The text promotes an ideology of 'controlled professionalism,' where teachers are expected to be critical thinkers, but only within the specific boundaries defined by the state curriculum.

In this regard, it is essential to emphasise that HOTS development should be viewed not only as a cognitive competency but also as a means of fostering critical awareness of broader social structures. As Freire (1970) emphasised in *Pedagogy of the Oppressed*, meaningful education must be both liberating and empowering. Thus, HOTS in teacher training must also equip future educators with the ability to read social realities critically and to develop inclusive, just, and sustainable teaching practices.

These findings reinforce Fairclough's (2003) argument that language in educational documents is an ideological medium that shapes modes of thinking and professional identity. Instructions in PPG modules do not merely convey cognitive content but also construct a vision of the "ideal teacher" envisioned by national education policy. Within this narrative, teachers are positioned as reflective thinkers, curriculum designers, technology users, and evidence-based assessors. However, in the

absence of exploration into the diversity of local contexts, the broader socio critical dimension remains marginalised.

Therefore, analysing HOTS representation through a critical discourse approach not only reveals how instructional texts shape learning orientations but also highlights the urgency to redesign teacher training modules more holistically. HOTS oriented modules should integrate cognitive approaches with social transformational strategies by embedding dialogic discourse, local context, and social justice values as core elements of instruction.

As a theoretical contribution, this study confirms that Critical Discourse Analysis provides a robust conceptual framework for analysing educational texts as ideological and political constructions. CDA enables us to view PPG modules not merely as collections of learning activities, but as policy documents carrying specific ideological agendas concerning the formation of professional teachers. By deconstructing textual structures and underlying power relations, CDA also opens up possibilities for developing more critical, participatory, and inclusive models of teacher education.

Practically, this study encourages PPG module developers to evaluate the structure critically. In conclusion, analysing HOTS representation through a critical discourse approach reveals that instructional texts do more than convey content; they construct a specific vision of the "ideal teacher." While this vision includes cognitive sharpness, it currently lacks the socio critical and dialogic depth found in international benchmarks. Therefore, HOTS oriented modules should evolve to integrate cognitive approaches with social transformational strategies embedding dialogic discourse and local context as core elements of instruction.

4. Conclusion

This study analysed the representation of Higher Order Thinking Skills in three core modules of Indonesia's Teacher Professional Education Program using Fairclough's Critical Discourse Analysis framework. The findings reveal a dual reality in the text. Textually, HOTS are explicitly represented through high order cognitive verbs embedded within imperative sentence structures. However, critically, this representation functions as a 'technocratic reduction,' where complex mental processes are simplified into administrative procedures.

At the level of discursive practice, the modules exhibit a monologic tendency. While pre-service teachers are positioned as active agents, the absence of dialogic space and the dominance of rigid instructions construct a power relation that limits genuine autonomy. In terms of social practice, the text reflects an ideology of 'controlled professionalism.' Unlike global trends that emphasize teacher autonomy and sustained reflection, the PPG modules prioritize standardization and compliance with national assessment metrics.

Consequently, the current integration of HOTS remains largely instrumental rather than transformative. The CDA approach reveals that the language used in these modules serves not only to instruct but to discipline teachers into specific professional roles that are technically competent but critically constrained.

Practically, this study suggests that for PPG modules to align with international benchmarks and truly foster 21st-century skills, curriculum developers must:
1. Shift from imperative instructions to dialogic activities that encourage debate and peer review;
2. Integrate HOTS with social-transformational themes (e.g., social justice, local wisdom) to move beyond technical cognition;
3. Redesign assessment strategies to balance the current summative-heavy approach with formative, reflective practices similar to those found in successful global contexts.

Future research is encouraged to include cross-national studies to understand further the ideological dynamics of HOTS representation across different education systems.

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