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EXPLORING THE EMPHASIS OF HIGHER-ORDER THINKING SKILLS IN PRIMARY-LEVEL ENGLISH SLOS: A COMPARATIVE STUDY OF SINDH (PAKISTAN) AND INDIA

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Abstract

This study compares level of integration of Higher Order Thinking Skills (HOTS)—Analysis, Synthesis, and Evaluation—in the Student Learning Outcomes (SLOs) of primary English textbooks in Sindh and India for Classes III to V. Grounded in Bloom's Taxonomy, the research adopts a qualitative, descriptive design and employs content analysis to compare the cognitive levels embedded in the prescribed SLOs of Sindh (Pakistan) and India. The study systematically categorizes SLOs according to higher-order cognitive domains through Bloom's Taxonomy of Measureable Verbs to determine the extent to which they promote critical thinking and deeper learning at the primary level. The findings reveal variations in the representation and distribution of HOTS across the two contexts, highlighting differences in emphasis on analytical, creative, and evaluative skills. While both curricula demonstrate attempts to incorporate higher-order cognitive processes, the depth and consistency of integration differ across grade levels. The study contributes to the broader discourse on curriculum development, textbook evaluation, and the promotion of critical thinking in primary education. It offers insights for policymakers, curriculum designers, and textbook developers seeking to strengthen the integration of HOTS within English language education at the foundational stage.

Keywords: *Curriculum, HOTS, India, Primary Education, Sindh, Student Learning Outcomes*

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1. Introduction

Education in the 21st century emphasizes not only the acquisition of knowledge but also the development of critical thinking and problem-solving skills. One of the widely acknowledged approaches to fostering such abilities is through Higher-Order Thinking Skills (HOTS), as conceptualized in Bloom's original taxonomy (1956), which includes Analysis, Synthesis, and Evaluation. These skills enable learners to interpret information, integrate ideas creatively, and make informed judgments, moving beyond rote memorization or basic comprehension. Integrating HOTS into curriculum frameworks is therefore essential for nurturing learners who can think independently, solve complex problems, and adapt to dynamic social and academic contexts.

In the context of primary education, Student Learning Outcomes (SLOs) serve as benchmarks for what learners are expected to achieve at each stage. SLOs guide textbook content, teaching strategies, and assessment practices. For English language education in Sindh (Pakistan) and India, SLOs are intended to progressively cultivate learners' cognitive skills, including HOTS, through reading comprehension, writing exercises, and interactive classroom activities. However, the extent to which these SLOs explicitly or implicitly promote Analysis, Synthesis, and Evaluation may vary across curricula. A systematic comparative study can reveal differences in emphasis, instructional focus, and potential gaps in promoting critical thinking among primary learners.

This study, therefore, aims to explore the emphasis of HOTS in the SLOs of English curricula for Classes III to V in Sindh (Pakistan) and India. By categorizing SLOs according to Bloom's measurable verbs associated with Analysis, Synthesis, and Evaluation, the research examines how these skills are integrated, identifies patterns across grade levels, and highlights differences between the two educational contexts. Understanding such curricular emphases is important for curriculum designers, educators, and policymakers seeking to strengthen critical thinking in early education and ensure that learners are equipped with essential cognitive competencies for future learning.

This study addresses the broader question of how HOTS are embedded in primary-level SLOs in Sindh and India, aiming to provide empirical insights that can inform curriculum development and classroom practice in English language education.

2. Review of the Literature

The cultivation of Higher-Order Thinking Skills (HOTS) in primary education has increasingly become a central focus for curriculum developers and educators worldwide, particularly within the domains of reading, writing, and critical thinking. HOTS, encompassing cognitive skills such as analysis, synthesis, and evaluation, are critical for enabling learners to engage deeply with content, solve complex problems, and apply knowledge creatively (Anderson & Krathwohl, 2001). In the context of English language education, the integration of HOTS is particularly important, as it supports not only

language acquisition but also cognitive development and critical reasoning from an early age.

India has seen considerable research on HOTS integration in textbooks and teaching practices. Studies by Qizi (2018) and Guo et al (2023) emphasize the evolving design of primary school textbooks, highlighting how modern editions align more closely with contemporary educational objectives and Bloom's Taxonomy to facilitate progression from lower-order to higher-order cognitive skills. Research by Chauhan et al. (2023) further demonstrates that, despite curriculum frameworks advocating HOTS in English language learning, discrepancies remain between intended learning outcomes and actual instructional materials, particularly in second-language writing tasks. Additional studies in the Indian context, including those by Narayanan and Adithan (2015) and Boral et al. (2025), indicate a persistent dominance of lower-order thinking skills (LOTS) in learning outcomes, underscoring the need for curriculum and pedagogical reforms. Investigations by Viswanathan and Sahana (2011) and Chauhan et al. (2023) highlight that extending textbook questions to target higher cognitive levels can significantly enhance students' analytical, evaluative, and creative capacities. Teacher perceptions also play a crucial role, as reported by Gupta and Mishra (2021), who note that inadequate pedagogical knowledge and constrained opportunities for professional development hinder effective HOTS implementation in Indian classrooms. Overall, Indian research emphasizes the potential of structured instructional frameworks, aligned with Bloom's Taxonomy, to support progressive cognitive skill development.

In Pakistan, numerous studies similarly highlight the need to strengthen HOTS integration in primary and secondary English textbooks. Nah (2025) and Panezai and Channa (2017) reveal systemic reliance on rote memorization and limited teacher training as barriers to effective implementation. Research analyzing textbooks and curricula—such as studies by Naz et al. (2020), Tajamal and Shakur (2022), and Jamil et al. (2024)—consistently shows that tasks emphasizing analysis, evaluation, and creation are sparse, with the majority of content targeting lower-order skills. Content analyses of the Single National Curriculum (SNC) and provincial textbooks (Ahmed et al., 2023; Malik, Hassan, & Butt, 2022) further indicate that while efforts have been made to include HOTS in SLOs, these remain unevenly distributed across grade levels and learning materials. Investigations into science, mathematics, and social studies textbooks also reveal a mismatch between policy intentions and classroom realities, where HOTS are often prescribed in theory but inadequately reinforced through exercises or assessments (Gulzar, 2019; Pervez et al., 2022; Naseer et al., 2020; Awan et al., 2018). Studies at the elementary level show students' actual HOTS competencies lag behind curricular expectations (Said & Aziz, 2024), highlighting the need for targeted teacher training, curriculum reform, and HOTS-oriented instructional design.

Within Sindh, research on HOTS integration is more limited but reveals similar trends. Shaikh and Memon (2021) found that Grade 10 English textbooks predominantly focus on lower-order cognitive tasks, with minimal engagement in analysis, evaluation, or creation. Examination-focused studies by Chandio, Pandhiani, and Iqbal (2016) and Zamir and Jan (2023) demonstrate that Sindh's board exams reflect the same predominance of LOTS, indicating that assessments do little to encourage higher-order thinking. Tertiary-level research, such as Niazi et al. (2021), suggests that structured use of Bloom's Taxonomy can enhance critical thinking even at higher levels of instruction, implying potential benefits if similar strategies are integrated earlier in primary education.

Comparative studies across Pakistan and India have primarily addressed topics such as historical narratives, national identity, and gender representation in textbooks (Joshi, 2010; Moonaka & Nadeem, 2017; Saher, 2023), rather than the cognitive demands embedded in English language curricula. While these analyses provide insight into curriculum content and societal influence on education, they do not evaluate how textbooks promote HOTS. This highlights a significant research gap: no study has systematically compared primary English textbooks from Pakistan and India in terms of HOTS integration within their respective curricula. Addressing this gap is essential for understanding how curricular design and textbook content can collectively foster higher-order cognitive skills in early learners.

This study aims to fill this gap by investigating the integration of HOTS in Student Learning Outcomes (SLOs) of English textbooks from Classes III to V in Sindh and India, with a particular focus on analysis, synthesis, and evaluation. By providing a comparative evaluation, the study contributes to understanding both regional similarities and differences in cognitive skill promotion, offering insights for policymakers, curriculum designers, and educators to enhance critical thinking development at the primary level.

2.1. Research Questions

The study was guided by the following main and sub research questions:

Main Question: To what extent HOTS (Analysis, Synthesis, and Evaluation) are integrated in Sindh's and Indian SLOs for English textbooks from Class III to V?

Sub-Questions: What specific cognitive levels (Analysis, Synthesis, and Evaluation) are most and least represented in the SLOs of Sindh's and Indian English textbooks from Class III to V?

2.2. Research Objectives

Main Objective: To compare SLOs of Sindh and India with reference to HOTS (Analysis, Synthesis, and Evaluation) for English textbooks of Class III to V.

Sub-Questions: To check and compare what specific cognitive levels (Analysis, Synthesis, and Evaluation) are most and least represented in the SLOs of Sindh's and Indian English textbooks from Class III to V?

2.3. Theoretical Framework

The present study is based on Bloom's Taxonomy of Cognitive Domains (1956), which provides a systematic framework for classifying educational objectives according to levels of cognitive complexity. Bloom's original taxonomy categorizes thinking skills into six hierarchical levels: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The upper three levels—Analysis, Synthesis, and Evaluation—constitute Higher-Order Thinking Skills (HOTS), which are central to fostering critical, reflective, and creative thinking in learners. These skills enable students to move beyond rote memorization and comprehension, engaging them in tasks that require reasoning, judgment, problem-solving, and knowledge synthesis.

In the context of primary English education, HOTS are essential for developing students' ability to understand and manipulate language, critically interpret texts, and engage with content meaningfully. The integration of HOTS in Student Learning Outcomes (SLOs) ensures that textbooks not only convey factual knowledge but also promote analytical and evaluative competencies that are crucial for lifelong learning. According to Guo et al (2023) and Narayanan and Adithan (2015) aligning instructional objectives and assessment tasks with Bloom's higher-order levels strengthens students' cognitive development by providing a structured progression from foundational knowledge to complex problem-solving and creative output.

The framework for this study adopts Bloom's original taxonomy, which emphasizes hierarchical cognitive progression. This framework allows for a detailed examination of SLOs in terms of the cognitive complexity they demand and the type of thinking skills they target. By applying this framework, the study can systematically classify and compare SLOs in Sindh's and Indian primary English textbooks for Classes III to V, identifying the extent to which HOTS are embedded across curricula.

Furthermore, the theoretical framework situates HOTS within a constructivist learning paradigm, which posits that learners actively construct knowledge through engagement, reflection, and critical inquiry (Piaget, 1972; Vygotsky, 1978). Constructivist theory reinforces the importance of SLOs that challenge students to analyze, evaluate, and create rather than merely recall information. In this sense, the framework not only guides the classification of cognitive tasks in textbooks but also highlights the pedagogical implications of HOTS integration: textbooks and curricula should be designed to scaffold higher-order thinking from early grades, preparing students for more complex academic tasks in subsequent educational stages.

By linking Bloom's original taxonomy and constructivist learning principles, this study provides a robust theoretical lens to investigate Research Question 1: To what extent are HOTS (Analysis, Synthesis, and Evaluation) integrated in Sindh's and Indian SLOs for English textbooks from Class III to V? This framework ensures that the analysis

addresses both the cognitive rigor of the SLOs and their educational relevance, providing insights into how curricular design supports or constrains the development of critical thinking and problem-solving skills among primary learners.

2.4. Research Methodology

This study employs a qualitative content analysis approach to investigate the extent to which Higher-Order Thinking Skills (HOTS)—Analysis, Synthesis, and Evaluation—are integrated in the Student Learning Outcomes (SLOs) of Sindh's and Indian English textbooks for Classes III to V. The research follows a descriptive-comparative design, allowing systematic examination and comparison of curricular objectives across the two educational contexts.

2.5. Population and Sample

The population of the study consists of all SLOs listed in English textbooks prescribed for Classes III to V in Sindh, Pakistan, and selected state and national-level primary English textbooks in India. A purposive sampling technique was employed to select textbooks that are widely used in the respective regions and officially prescribed by the curriculum authorities. This ensures that the sample represents the intended instructional objectives for the targeted grade levels.

2.6. Data Collection

Data were collected by systematically extracting all SLOs from the selected textbooks. Each SLO was recorded in a structured coding sheet to facilitate content analysis. The coding sheet included columns for the textbook name, class level, the specific cognitive skill targeted, and the action verbs used in each SLO.

2.7. Analysis and Discussion

This section presents a detailed qualitative content analysis of the Student Learning Outcomes (SLOs) for English in Classes III, IV, and V in Sindh (Pakistan) and India. The purpose is to examine the extent to which Higher-Order Thinking Skills (HOTS)—namely Analysis, Synthesis, and Evaluation—are integrated into the curricular expectations. The classification and interpretation of SLOs are grounded in Taxonomy of Educational Objectives, commonly referred to as Bloom's Original Taxonomy (1956), with particular focus on the upper three cognitive levels.

The analysis is based on official curriculum documents: National Curriculum for English Language Grades I–XII (2006) for Sindh and Learning Outcomes at the Elementary Stage (2017) for India. Each SLO was examined linguistically and conceptually to determine whether it requires learners to analyze textual structures, synthesize ideas, or express evaluative judgments. The identification of HOTS was guided by measurable action verbs and the cognitive processes implied in the phrasing of each outcome.

Unlike textbook exercises, SLOs function as formal benchmarks that signal curricular intent. Therefore, the presence, clarity, and distribution of higher-order verbs in these outcomes reflect the systemic emphasis placed on critical thinking at the policy level. The analysis does not merely count occurrences of verbs but interprets the cognitive demand embedded within each directive. For instance, outcomes requiring learners to "*infer*," "*distinguish*," "*compare,*" or "*justify*" were examined in terms of the depth of reasoning they demand and the extent to which they align with the upper levels of Bloom's taxonomy.

The section proceeds grade-wise, first presenting Sindh's SLOs followed by Indian SLOs, and then offering a comparative interpretation. This structure enables a systematic evaluation of curricular emphasis and highlights whether HOTS are explicitly articulated, implicitly embedded, or minimally represented in each context. The discussion aims to reveal patterns of progression across grade levels and to determine whether the integration of Analysis, Synthesis, and Evaluation reflects deliberate curricular design or incidental inclusion. Following are the data tables for comparison:

Table 1

Comparative HOTS Distribution in Class III (Sindh and India)

HOTS Level	Sindh (Class III)	India (Class III)
Analysis	Strong, explicit	Limited, implicit
Synthesis	Minimal	Minimal
Evaluation	Explicit personal judgment	Implicit opinion

Table 2

Comparative HOTS Distribution in Class IV (Sindh and India)

HOTS Level	Sindh (Class IV)	India (Class IV)
Analysis	Strong and overly loaded	Adequate
Synthesis	Adequate	Adequate
Evaluation	Adequate	Clear but minimal

Table 3

Comparative HOTS Distribution in Class V (Sindh and India)

HOTS Level	Sindh (Class V)	India (Class V)
Analysis	Overly Emphasized	Limited
Synthesis	Increased Emphasis	Increased Emphasis
Evaluation	Adequate	Increased Emphasis

2.8. Sindh's SLOs

The analysis of Sindh's Student Learning Outcomes (SLOs) for Classes III, IV, and V demonstrates a clear, explicit, and systematic integration of Higher-Order Thinking Skills (HOTS), particularly at the level of Analysis. A careful linguistic and conceptual examination of the outcomes shows that learners are consistently required to examine relationships, interpret structures, infer meaning, and express reasoned judgments. These cognitive demands align strongly with the upper levels of Taxonomy of Educational Objectives, particularly Analysis, Synthesis, and Evaluation.

Across the three grade levels, Analysis emerges as the most dominant cognitive category. The SLOs repeatedly require learners to engage in relational and structural examination of texts. For instance, directives such as "*Show relationships between sentences in a paragraph*," "*Identify paragraph as a unit of thought*," and "*Recognize that sentences in a paragraph relate through transitional devices*" clearly demand structural breakdown and cohesion analysis. Learners are further expected to "*Distinguish fact from opinion,*" "*Locate an opinion in a text*," and "*Identify topic sentence and supporting details in a paragraph,*" which require categorization, differentiation, and examination of authorial stance. Inferential reasoning is consistently promoted through tasks such as "*Predict what follows using context and prior knowledge,*" "*Make simple inferences using context and prior knowledge,*" and "*Use context to infer missing or difficult words.*" These directives move beyond literal comprehension and require logical reasoning and analytical engagement. Additionally, outcomes like "*Compare information in pie charts and bar graphs*" and "*Describe sequences of events in pictures and diagrams*" indicate that analytical skills are extended to visual data interpretation, further strengthening the analytical orientation of the curriculum.

While Analysis is heavily emphasized, Synthesis is also visibly incorporated across the grades. Learners are encouraged to reconstruct and reorganize information through outcomes such as "*Retell story in sequence,"* "*Retell stories sequentially,*" "*Use summary skills (mind maps, gapped summaries),*" and "*Summarize a short folktale*." These tasks require selecting key ideas, restructuring content, and presenting information in a new form. Creative integration is further promoted through "*Express understanding of story through role play*" and "*Identify and utilize study skills (brainstorming, mind maps, note-taking),*" which involve combining comprehension with performance and organization skills. The directive "*Relate what is read to own experiences*" reflects integrative thinking where textual meaning is connected with personal knowledge, indicating movement toward higher cognitive construction.

Evaluation is explicitly and consistently articulated in Sindh's SLOs. Learners are required to "*Apply world knowledge and own opinion to text,*" "*Relate text to own feelings and experiences*," and "*Describe story elements and express preferences with reasons*."

The requirement to provide reasons and justification demonstrates structured evaluative reasoning rather than simple opinion sharing. Furthermore, outcomes such as "*Respond to open-ended and inferential questions*" and "*Express opinions about poems and stories giving reasons*" clearly align with the Evaluation level, as they demand judgment supported by evidence or personal criteria.

Overall, the cumulative analysis indicates that Sindh's SLOs reflect a deliberate curricular design aimed at embedding HOTS in a systematic manner. Analysis is strongly and repeatedly emphasized, often appearing as the dominant cognitive demand. Synthesis and Evaluation are also clearly integrated, showing gradual strengthening across grade levels. The clarity of measurable verbs and explicit articulation of higher-order directives suggest that textbook developers are expected to incorporate these cognitive expectations directly into instructional materials. This structured emphasis reflects a strong curricular commitment to fostering critical and reflective thinking skills at the primary level.

2.9. Indian SLOs

The analysis of Indian Student Learning Outcomes (SLOs) for Classes III, IV, and V indicates the presence of Higher-Order Thinking Skills (HOTS), though the emphasis varies in depth and distribution when examined through the lens of Taxonomy of Educational Objectives. While Analysis, Synthesis, and Evaluation are incorporated within the curriculum document, their articulation tends to be more activity-oriented and, at times, implicitly framed rather than systematically benchmarked.

Analysis is present in outcomes that require learners to interpret textual meaning and identify structural elements. For example, directives such as "*Identifies main idea, details and sequence and draws conclusions,*" and "*Raises questions on the text read"* require learners to deconstruct texts and probe deeper meaning. Similarly, outcomes like "*Infers the meaning of unfamiliar words by reading them in context*" and "*Reads text with comprehension, locates details and sequence of events*" demand contextual reasoning and structural understanding. The directive "*Connects inferred ideas from reading with personal experiences*" also reflects relational thinking, as learners examine links between textual information and prior knowledge. However, compared to Sindh's SLOs, the number of explicitly analytical directives appears more limited, and Analysis does not dominate the curriculum framework across all grade levels.

Synthesis becomes increasingly visible, particularly in the upper primary stage. Learners are required to "*Draws and writes short sentences related to stories read*," "*Presents orally and in writing the highlights of a given text,*" and "*Writes informal letters or messages with a sense of audience.*" These tasks involve organizing and combining ideas to produce coherent outputs. At higher grades, Synthesis is more strongly articulated through outcomes such as "*Conducts short interviews and composes responses,"* "*Writes paragraphs from verbal and visual clues with linkers,*" "*Writes a 'mini biography' and*

'mini autobiography'," and "*Attempts to write creatively (stories, poems, posters).*" These directives clearly require learners to generate original content, integrate ideas, and structure information meaningfully. Compared to earlier grades, there is a noticeable shift toward creative production and language generation, suggesting a progression toward higher-order integration at the Synthesis level.

Evaluation is also embedded within the Indian SLOs, though often framed within communicative and reflective activities. Outcomes such as "*Expresses orally opinion / understanding about story and characters,*" "*Speaks briefly on familiar social / environmental issues,*" "*Writes and speaks on peace, equality suggesting personal views,*" and "*Appreciates diversity in food, dress, customs and festivals*" require learners to articulate judgments and personal perspectives. These directives align with the Evaluation level as they involve expressing values, opinions, and reflective understanding. However, unlike Sindh's SLOs, evaluative tasks in the Indian framework do not consistently require explicit justification or structured reasoning (e.g., "*giving reasons*"), which makes the evaluative emphasis comparatively less formalized.

Overall, Indian SLOs demonstrate a gradual shift from limited analytical emphasis in lower grades toward stronger incorporation of Synthesis and Evaluation in higher grades. The integration of HOTS appears more balanced in later stages, particularly through creative writing, role play, interviews, and socially reflective tasks. However, the articulation of higher-order expectations tends to be less explicit and less structurally emphasized compared to Sindh's SLOs. The curriculum embeds HOTS within interactive and communicative activities, suggesting an implicit and progressive approach rather than a heavily analytical one.

3. Comparative Analysis of HOTS in Sindh and Indian SLOs

A comparative examination of the Student Learning Outcomes (SLOs) for Sindh (Pakistan) and India reveals notable differences in the emphasis, distribution, and progression of Higher-Order Thinking Skills (HOTS) across Classes III to V.

In the case of Sindh, HOTS integration is explicit, systematic, and heavily weighted toward Analysis. Across all three grades, students are repeatedly engaged in tasks that require critical examination of text, identification of relationships within and between paragraphs, inference-making, distinguishing fact from opinion, and interpretation of textual and visual information. For example, SLOs such as *"Show relationships between sentences and paragraphs"* and *"Distinguish fact from opinion"* demonstrate a deliberate curricular emphasis on analytical reasoning. Synthesis is also incorporated, particularly through activities that require students to organize and reconstruct information, retell stories, summarize content, and create visual or written representations of understanding. Evaluation is addressed through tasks that ask learners to provide personal opinions, justify responses, and relate textual content to their own

experiences. The Sindh curriculum, therefore, presents a progression in HOTS, with Analysis consistently dominating, Synthesis emerging more clearly in higher grades, and Evaluation systematically introduced and scaffolded.

In contrast, Indian SLOs show a more balanced and activity-oriented approach, but with less explicit emphasis on Analysis, especially in the lower grades. Analytical tasks such as *"Identifies main idea, details and sequence and draws conclusions"* and *"Infers the meaning of unfamiliar words in context"* are present but limited in number and often embedded within communicative exercises rather than articulated as explicit benchmarks. Synthesis is progressively emphasized through writing paragraphs, letters, mini-biographies, and creative storytelling, highlighting students' ability to generate and organize original content. Evaluation is present through tasks requiring personal judgment, opinion expression, or reflection on social and cultural contexts, but learners are not always prompted to justify or critically substantiate their judgments. Overall, Indian SLOs incorporate HOTS in a progressive, implicit, and integrated manner, focusing on practical applications and interactive learning rather than a structured analytical framework.

A grade-wise comparison shows that while both curricula demonstrate progression in HOTS from Class III to V, Sindh prioritizes analytical reasoning, with Synthesis and Evaluation emerging gradually, whereas India emphasizes creative and reflective expression, with Analysis present but not dominant. The table below summarizes the comparative distribution:

Table 4

HOTS Level	Sindh (Class III-V)	India (Class III-V)
Analysis	Strong, explicit, dominant	Limited, implicit, supplementary
Synthesis	Adequate, progressively emphasized	Increasingly emphasized, central in higher grades
Evaluation	Adequate, scaffolded, justified	Present, reflective, minimal explicit justification

In conclusion, both curricula aim to develop higher-order thinking in learners, but the methodology and emphasis differ. Sindh's SLOs systematically develop analytical thinking, with structured tasks for Synthesis and Evaluation, ensuring explicit benchmarks for HOTS. Indian SLOs adopt a more balanced and implicit approach, progressively integrating Synthesis and Evaluation through creative and communicative exercises while Analysis remains secondary. This contrast highlights different pedagogical priorities: a structured analytical focus in Sindh versus an integrated, activity-based approach in India.

4. Conclusion

The present study set out to examine the extent to which Higher-Order Thinking Skills (HOTS)—specifically Analysis, Synthesis, and Evaluation, as defined in Bloom's original taxonomy (1956)—are integrated into the Student Learning Outcomes (SLOs) of Sindh (Pakistan) and Indian English curricula for primary classes III to V. The comparative analysis reveals that both curricula recognize the importance of developing critical thinking and problem-solving abilities among young learners, yet the emphasis and systematic incorporation of these skills differ significantly. In the case of Sindh, the SLOs show a strong and explicit focus on Analysis across all three classes, with students consistently required to examine textual relationships, distinguish facts from opinions, infer meaning from context, and reorganize information logically. Synthesis and Evaluation are also present but emerge more gradually, reflecting a curriculum designed to build foundational analytical skills first before encouraging learners to create new ideas and make informed judgments. In contrast, the Indian SLOs demonstrate a more balanced but relatively implicit integration of HOTS. Analysis appears at a moderate level, particularly through tasks requiring identification of main ideas, sequences, and contextual understanding. Synthesis and Evaluation are emphasized through creative, communicative, and experiential exercises, such as writing short paragraphs, engaging in role plays, expressing opinions, and relating text to personal experiences. This approach suggests a pedagogy that prioritizes learner expression, imaginative engagement, and social application of knowledge alongside cognitive development. Overall, the findings indicate that while both curricula aim to foster critical thinking, Sindh's SLOs provide clearer benchmarks, structured expectations, and explicit instructional guidance for developing HOTS, whereas Indian SLOs adopt a more implicit, activity-centered strategy that integrates these skills into practical learning contexts. The comparative insights from this research underscore the need for curriculum designers and educators to not only include higher-order objectives but also to articulate them clearly in SLOs and associated instructional materials, ensuring that students progressively acquire the cognitive competencies essential for lifelong learning and complex problem solving.

4.1. Ethical Considerations

The study used publicly available textbooks and curriculum documents, ensuring ethical compliance. All data were handled responsibly, and findings are reported objectively without misrepresentation of the original materials.

4.2. Funding Declaration

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