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FILIPINO TEACHERS' APPLICATION OF THE SOLO FRAMEWORK IN MOLINO ELEMENTARY SCHOOL: BASIS FOR IMPROVING INSTRUCTIONAL PRACTICES

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Abstract

This action research, titled "Filipino Teachers' Application of the SOLO Framework in Molino Elementary School: Basis for Improving Instructional Practices," aimed to examine how Grade 1–6 teachers apply the Structure of Observed Learning Outcomes (SOLO) Taxonomy in lesson planning, questioning strategies, and assessment design, and to identify challenges and opportunities in its implementation. This research used a qualitative-descriptive action research design. Data were gathered from 12 Filipino teachers, including 8 Master Teachers, through validated survey questionnaires, classroom observations, document analysis, and focus group discussions (FGDs). Thematic analysis was employed for the qualitative data, while descriptive statistics summarized teacher responses. Although most teachers demonstrated moderate to high familiarity with higher-order thinking frameworks, only a few had formal training on SOLO; consequently, application remained intuitive and inconsistent, particularly in assessment design. Teachers reported applying SOLO-aligned strategies only "sometimes" in lesson planning (M = 2.81), questioning (M = 3.06), and assessment design (M = 2.69). Major barriers, each cited by most teachers, included curriculum pacing pressures, large class sizes, and insufficient training in differentiating cognitive tasks. Despite these challenges, teachers expressed strong interest in practical supports, with nearly all endorsing SOLO-aligned lesson exemplars, Learning Action Cell (LAC)-based collaboration, and targeted workshops. The findings suggest that intentional, structured integration of the SOLO Framework has the potential to enhance instructional quality and student cognition when supported by school-based professional development. It is recommended that Molino Elementary School develop a SOLO Resource Bank, embed SOLO principles into LAC sessions, and pilot a "SOLO Spotlight" initiative to institutionalize deeper learning practices aligned with the MATATAG Curriculum's vision of competent and critical learners.

Keywords: *SOLO Taxonomy; action research; instructional practices; higher-order thinking; Learning Action Cell; MATATAG Curriculum; Filipino language teaching*

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INTRODUCTION

Background of the Study

In an era where 21st-century education demands more than rote memorization—requiring instead critical analysis, synthesis, and transfer of knowledge—classroom instruction must be deliberately structured to cultivate deeper cognitive engagement. Despite national curricular reforms such as the MATATAG Curriculum, which emphasizes higher-order thinking and learner-centered pedagogy, many public school classrooms in the Philippines continue to operate within surface-level instructional paradigms. This gap may be attributed less to a lack of teacher commitment than to insufficient access to practical frameworks that scaffold progressive cognitive development.

The SOLO Taxonomy and Its Instructional Applications

It is within this context that the Structure of Observed Learning Outcomes (SOLO) Taxonomy (Biggs & Collis, 1982) emerges as a powerful yet underutilized tool—one that moves beyond classifying learning objectives to explicitly mapping the quality and complexity of student understanding across five hierarchical levels: pre-structural, uni-structural, multi-structural, relational, and extended abstract. At the pre-structural level, the learner has not yet grasped the task; at the uni-structural level, a single relevant idea is addressed; at the multi-structural level, several relevant ideas are addressed but treated separately; at the relational level, these ideas are integrated into a coherent whole; and at the extended abstract level, the integrated understanding is generalized and transferred to new contexts.

Research across disciplines has examined SOLO as a lens for instruction and assessment. A systematic review has synthesized its use in mathematics education (Adeniji et al., 2022), and SOLO-based approaches have been investigated in the teaching of coordinate geometry (Ghunaimat & Alawneh, 2024), in formative assessment in science (Sudaria & Sanchez, 2024), and in measuring levels of critical thinking in an International Baccalaureate Primary Years Programme setting (Triana et al., 2023). In language education, SOLO has been applied to a writing module built on self- and peer assessment at the primary level in Malaysia (Abdullah & Masran, 2021), to gamified English language learning (Suryani & Syahbani, 2023), and to the teaching of English (Clavacio & Legaspi-Estoque, 2025). Taken together, this body of work points to the value of SOLO for making learning progression visible; however, comparatively little of it documents how teachers themselves, often without formal training, take up the framework in routine planning, questioning, and assessment.

Statement of the Problem and Objectives

This action research, titled “Filipino Teachers’ Application of the SOLO Framework in Molino Elementary School: Basis for Improving Instructional Practices,” seeks to address a critical “why”: Why do well-intentioned teachers struggle to consistently design instruction that fosters deep, transferable learning? The study is driven by four core objectives:

1. to examine how Grade 1–6 Filipino teachers currently apply the SOLO framework in lesson planning, questioning strategies, and assessment design;
2. to identify the instructional practices that naturally align with SOLO levels, even in the absence of formal training;
3. to uncover systemic and professional barriers—such as curriculum pacing, large class sizes, and limited professional development—that hinder intentional SOLO implementation; and
4. to co-construct a school-based action plan that transforms the SOLO Taxonomy from an abstract theory into a living, actionable guide for daily teaching.

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Significance of the Study

The significance of this inquiry lies in its potential to bridge the persistent theory–practice divide in Philippine basic education. While global scholarship affirms SOLO's efficacy in enhancing formative assessment and cognitive progression (Adeniji et al., 2022; Sudaria & Sanchez, 2024; Triana et al., 2023), research on how the framework is actually used in Philippine elementary classrooms, particularly in Filipino-language instruction, remains comparatively sparse. By documenting current practice, barriers, and teacher-identified supports, the study offers a school-based evidence base for professional development consistent with the MATATAG Curriculum's vision of competent and critical learners, with relevance for other schools operating under similar conditions.

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METHODS

Research Design

This study employed a qualitative-descriptive action research design, grounded in the cyclical model of planning, acting, observing, and reflecting (Kemmis & McTaggart, 2005). This approach was selected to enable systematic inquiry into teachers' instructional practices while simultaneously fostering professional learning and school-based improvement. Unlike experimental or correlational designs that prioritize generalizability or causal relationships, this descriptive action research focuses on contextual understanding, reflective practice, and the co-construction of actionable knowledge within Molino Elementary School.

Participants and Sampling

The study involved 12 Filipino language teachers from Grades 1 to 6 at Molino Elementary School during School Year 2025–2026. The sample included 8 Master Teachers, purposively selected based on their role as instructional leaders and their direct engagement in teaching the Filipino subject. Purposive sampling ensured the inclusion of participants with diverse teaching experience (ranging from 3 to over 20 years) and varying levels of exposure to cognitive taxonomies, thereby enriching the depth of the data. Participation was voluntary.

Instruments

A multi-method triangulation strategy was employed to enhance the validity and comprehensiveness of the data, ensuring a holistic understanding of how Filipino teachers at Molino Elementary School apply the SOLO Framework in their instructional practices. Four instruments were used:

a. **Survey questionnaire.** A validated questionnaire comprising both Likert-scale items (1 = Never to 5 = Always) and open-ended prompts captured quantitative data on the frequency of SOLO-aligned strategies and qualitative insights into teachers' experiences.
b. **Semi-structured interview guides.** These were used during FGDs to probe the challenges teachers face, the adaptations they make, and their perceived efficacy of SOLO-based instruction.
c. **Classroom observation protocol.** The protocol, adapted from the Department of Education's Classroom Observation Tool (COT), was used to document observable evidence of SOLO-level scaffolding in real-time teaching, particularly in questioning techniques, task design, and feedback practices.
d. **Document analysis checklists.** These guided the systematic review of lesson plans, assessment rubrics, and student outputs to identify tangible indicators of intentional SOLO integration in daily instructional materials.

This layered approach ensured methodological rigor through cross-verification of findings across multiple sources.

Data Collection Procedure

Data collection unfolded over a two-month period from February to March 2026 and was carried out in three distinct yet interconnected phases.

Phase 1: Baseline Assessment. The researcher personally administered the validated survey questionnaire during scheduled Learning Action Cell (LAC) sessions, taking care to clarify items and ensure full comprehension among participants.

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Phase 2: Observation and Documentation. Four Master Teachers were observed while delivering live Filipino lessons. Detailed field notes were recorded using a modified version of the Department of Education's COT, and relevant instructional materials, such as lesson plans and student outputs, were collected with permission to examine SOLO-aligned practices in authentic classroom contexts.

Phase 3: Reflective Dialogue. Two FGDs were conducted with the participating teachers in a quiet school venue to foster open and thoughtful exchange. The sessions were audio-recorded with informed consent and later transcribed verbatim, and participants were encouraged to share their authentic experiences, perceived barriers, and practical suggestions regarding the integration of the SOLO Framework into daily instruction.

This phased, multi-method approach ensured rich, triangulated data that captured both the breadth and depth of teachers' engagement with the SOLO Taxonomy.

Ethical Considerations

All procedures adhered to ethical standards. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Anonymity was maintained through coding (e.g., T01, MT03), data were stored securely, and participants retained the right to withdraw at any stage.

Data Analysis

Quantitative data from the survey were analyzed using descriptive statistics (frequencies, means, and standard deviations) to determine the extent and consistency of SOLO application across lesson planning, questioning, and assessment. Qualitative data, drawn from FGD transcripts, observation notes, and open-ended responses, underwent thematic analysis following Braun and Clarke's (2006) six-phase approach: (1) familiarization, (2) initial coding, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Emerging themes (e.g., "intuitive alignment," "curriculum pacing pressure," and "need for practical tools") were cross-verified with quantitative trends to ensure methodological coherence. Final interpretations were contextualized within current literature on SOLO implementation and DepEd's MATATAG Curriculum framework to yield actionable, school-specific recommendations.

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RESULTS

The results are presented in line with the study's objectives: teachers' training and familiarity, the extent of SOLO application, practices that intuitively align with SOLO, barriers to implementation, and the supports teachers identified.

Training and Familiarity with SOLO

Only a few of the 12 Filipino teachers surveyed had received formal training on the SOLO Taxonomy, despite most reporting moderate to high familiarity with higher-order thinking frameworks.

Extent of SOLO Application in Lesson Planning, Questioning, and Assessment Design

On a 5-point scale (1 = Never to 5 = Always), teachers reported "sometimes" applying SOLO-aligned strategies in lesson planning ($M = 2.81$), questioning ($M = 3.06$), and assessment design ($M = 2.69$). Questioning obtained the highest mean, while assessment design obtained the lowest.

These results indicate that teachers applied SOLO-aligned strategies neither consistently nor intentionally, with the weakest application in assessment design.

Practices Intuitively Aligned with SOLO

Teachers demonstrated strong pedagogical instincts that intuitively mirrored SOLO principles, such as using Venn diagrams to prompt relational thinking and open-ended prompts to elicit extended abstract reasoning. This pattern emerged as the theme "intuitive alignment." However, because it was not grounded in structured knowledge of the framework, application remained intuitive and inconsistent, particularly in designing assessments that differentiate surface-level from deep-level understanding.

Barriers to Intentional SOLO Implementation

Three major barriers emerged, each cited by most teachers: curriculum pacing pressures (the theme "curriculum pacing pressure"), large class sizes, and insufficient training in differentiating cognitive tasks.

Teacher-Identified Supports

Despite these challenges, teachers expressed strong interest in practical supports (the theme "need for practical tools"). Nearly all endorsed SOLO-aligned lesson exemplars, LAC-based collaboration, and targeted workshops.

DISCUSSION

The findings reveal a critical disconnect. Teachers at Molino Elementary School possess strong pedagogical instincts that intuitively mirror SOLO principles, yet they lack the structured knowledge and tools to implement the framework consistently and intentionally. That most teachers reported moderate to high familiarity with higher-order thinking frameworks while only a few had formal SOLO training helps explain why SOLO-aligned practice appeared as isolated good practice, not as a deliberate design principle.

The comparatively low mean for assessment design ($M = 2.69$) is especially consequential. SOLO's distinctive value lies in making the quality of student understanding observable, which depends on tasks and criteria that can distinguish surface-level from deep-level responses. Without that capacity, teachers may engage students in rich activities yet still lack a dependable way to determine whether those activities produce relational or extended abstract understanding. The slightly higher mean for questioning suggests that teachers are most comfortable

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applying SOLO-compatible ideas in real-time interaction, where habitual practices such as open-ended prompting can operate without formal planning.

The barriers identified (curriculum pacing pressures, large class sizes, and insufficient training in differentiating cognitive tasks) are systemic and professional, not motivational. They suggest that the gap between curricular aspirations and classroom practice, noted amid reforms such as the MATATAG Curriculum, reflects capacity and conditions rather than commitment. This interpretation is reinforced by teachers' strong interest in practical supports, which suggests readiness for change when the means are made available.

These findings are consistent with studies indicating that explicit, structured use of SOLO in language instruction and assessment supports more systematic integration of the framework (Clavacio & Legaspi-Estoque, 2025; Suryani & Syahbani, 2023), and with work showing that SOLO-based tasks can make levels of understanding and critical thinking more measurable (Sudaria & Sanchez, 2024; Triana et al., 2023). Thus, the data underscore that without deliberate capacity-building and contextualized resources, even motivated teachers cannot fully leverage powerful frameworks like SOLO to foster deeper learning, highlighting an urgent need for school-based interventions tailored to the realities not only of Molino Elementary School but of other schools in the country.

Implications for Practice: Toward a School-Based Action Plan

In keeping with the action research orientation and the fourth objective of the study, the findings point to a school-based action plan built on what teachers themselves endorsed: SOLO-aligned lesson exemplars, LAC-based collaboration, and targeted workshops. Because LAC sessions are already an established venue for professional learning, they offer a practical, low-cost channel for embedding SOLO principles, including training on differentiating cognitive tasks and designing SOLO-aligned assessments. A SOLO Resource Bank of exemplars and tools would reduce the planning burden created by pacing pressures and large classes, and a "SOLO Spotlight" initiative could be piloted to institutionalize deeper learning practices.

Limitations

The study was conducted in a single school with a small, purposively selected group of 12 Filipino language teachers; hence, the findings are context-specific and are not intended for statistical generalization. The survey relied on self-reported frequency, classroom observations were limited to four Master Teachers, and the study examined teacher practice rather than student learning outcomes. Triangulation across surveys, observations, document analysis, and FGDs mitigates, but does not eliminate, these limitations.

Conclusion and Recommendations

Filipino teachers at Molino Elementary School already exhibit instructional instincts compatible with the SOLO Taxonomy, but its application remains intuitive and inconsistent, particularly in assessment design, owing to limited formal training and the pressures of pacing and class size. The study concludes that intentional, structured integration of the SOLO Framework has the potential to enhance instructional quality and student cognition when supported by school-based professional development. Based on the findings, the following are recommended:

1. Molino Elementary School should develop a **SOLO Resource Bank** containing SOLO-aligned lesson exemplars, questioning prompts, and assessment tools.
2. School leaders should embed SOLO principles into **Learning Action Cell sessions** and provide targeted workshops, with emphasis on differentiating cognitive tasks and designing SOLO-aligned assessments.
3. The school should pilot a **"SOLO Spotlight"** initiative to institutionalize deeper learning practices aligned with the MATATAG Curriculum's vision of competent and critical learners.

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4. Future research should examine the effects of the action plan on student learning outcomes, extend the inquiry to other schools, grade levels, and subject areas, and evaluate the pilot initiatives across successive action research cycles.

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