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TASK-BASED LANGUAGE TEACHING INTEGRATED WITH DIGITAL LITERACY IN IMPROVING PRE-SERVICE INDONESIAN LANGUAGE LEARNERS' COMMUNICATIVE COMPETENCES

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Abstract

This study investigates whether an integrated Task-Based Language Teaching (TBLT) and digital literacy sequence enhances pre-service Indonesian Language (PIL) teachers' communicative competences and how they perceive and adapt the model under classroom constraints. Using an explanatory sequential mixed-methods design, researchers first conducted a quantitative pre–post evaluation with 25 PIL participants enrolled in an Indonesian Language Education program. Communicative performance was assessed through parallel speaking, writing, and multimodal tasks rated on four analytic dimensions—linguistic, pragmatic, discourse, and strategic—supplemented by a multimodal criterion. Descriptive statistics indicated overall gains to a proficient band, with discourse and strategic competences displaying the highest central tendency and the narrowest dispersion. Linguistic and pragmatic competences improved but showed wider between-learner variance, suggesting uneven consolidation of affixes, pronouns, particles, and register-appropriate choices. The qualitative follow-up (observations, interviews) explained these patterns: the pre-task → task → post-task cycle, combined with purpose-bound digital supports, stabilized interactional routines, made discourse organization visible, and prompted targeted focus-on-form. Participants adapted to assessment pressure, class size, and technology access through role rotation, offline-first drafting, low-bandwidth alternatives (audio + transcript), and a standardized "core trio" of tools, which reduced cognitive load and widened equitable participation.

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INTRODUCTION

Indonesian language education has long navigated a difficult balance between policy-driven accountability and communicative aims, a tension that shapes classroom method, materials, and assessment culture. Within this landscape, task-based language teaching (TBLT) is widely endorsed yet inconsistently enacted. Systemic constraints—exam-oriented assessment privileging discrete grammar points, large mixed-proficiency classes, and compressed timetables that truncate iterative task cycles—undercut its promise (Ismail, 2017; Marzuki, 2022). In practice, teachers often conflate "activities" with "tasks," producing busywork rather than outcome-oriented interaction. Materials rarely foreground Indonesian-specific pragmatics—address terms (Pak/Bu), pronoun choices (saya/aku/Anda/kamu), particles (kok, dong, kan), and register shifts—so learners seldom encounter the socio-pragmatic texture of real exchanges (Maulana, 2021; Sundari, Miranti, & Sulaeman, 2021).

Where syllabi are genre-based, teachers struggle to align model texts (surat dinas, teks eksposisi) with open-ended tasks that elicit spontaneous language use. Feedback practices skew toward correctness over intelligibility, limiting opportunities for negotiated meaning and repair that are central to communicative development (Tusino et al., 2020; Widanta, 2023).

Implementation quality further varies because many Indonesian teachers were trained in traditional classroom routines and feel uneasy ceding the communicative floor to learners (Widanta, 2023). Task complexity is frequently miscalibrated: tasks that are too simple invite reliance on L1 and gestures, while overly complex tasks trigger silence or code-switching (Xue, Huang, & Liu, 2022). Assessment literacy remains uneven; teachers need analytic rubrics that capture intelligibility, discourse organization, and pragmatic appropriateness rather than mere error counts (Sholeh, Saija, & Nur, 2021; Sarigoz & Fisne, 2019). Authentic input outside school is limited—especially beyond urban centers—reducing topical relevance and modeling variety (Sabari & Hashim, 2023; Milon et al., 2023). Meanwhile, technology is either underused or overused without scaffolding, producing cognitive overload instead of communicative affordances. Equity issues—device access, bandwidth, and diverse linguistic backgrounds—demand flexible task pathways so that all learners can participate meaningfully.

Against this backdrop, many Indonesian language (IL) learners display partial communicative competence: they can memorize affixes (meN-, -kan, -i) but falter in spontaneous speech, particularly in selecting appropriate pronouns and deploying discourse markers such as namun, selain itu, and akibatnya (Defina, 2018; Bram & Angelina, 2022). Listening comprehension suffers when learners encounter regional accents, reduction, or colloquial phonology, indicating restricted exposure to register and dialectal variation (Putri et al., 2021; Bram & Angelina, 2022). In writing and speaking, coherence and cohesion are inconsistent; students underuse cohesive devices and mismanage clause-combining, compromising textual flow (Darmawati, 2017; Takač & Ivezić, 2019). Interactional breakdowns are seldom repaired because learners lack practiced strategies—asking for clarification, paraphrasing, and stalling without losing the turn—that sustain meaning-making (Rabab'ah, 2015; Milliner & Dimoski, 2022). Past attempts to close these gaps have focused on discrete grammar drills or imitation of model texts; while helpful for accuracy, they rarely create conditions for negotiation of meaning or strategic uptake, leaving learners fluent in forms but not in interaction.

TBLT offers a principled response by sequencing pre-task priming, task performance, and post-task focus-on-form so that grammar becomes functional in context. Pre-task work heightens noticing of critical forms and pragmatic moves; the task phase pushes output through information gaps, problem solving, and role-play; post-task reflection redirects attention to forms and strategies that actually surfaced, including affix selection, particles, and register management (Milliner & Dimoski, 2022; Long, 2021). Such cycles support discourse-level development because they obligate learners to plan, connect propositions, and attend to audience needs, strengthening coherence and cohesion (Takač & Ivezić, 2019; Vold, 2022). Evidence from task repetition and re-tasking suggests that fluency gains need not trade off against accuracy when conditions are carefully manipulated, and that learners' strategic repertoires expand as they practice repair, confirmation checks, and clarification requests in authentic problem spaces (Rabab'ah, 2015; Long, 2021; Tsunemoto & Trofimovich, 2024).

For pre-service Indonesian Language (PIL) lecturers and teachers, TBLT doubles as content pedagogy and professional apprenticeship. Linguistic competence can be deepened through form-focused episodes that arise organically from learner output—affix choice in argument structure, particle pragmatics for stance-taking—energized by purposeful tasks (Islami & Senom, 2024; Khosiyono, 2021; Birrina & Emaliana, 2022). Discourse competence benefits from genre-driven tasks—news briefs, formal memos, public speeches—where

macro-organization and cohesive ties are consequential for success; genre awareness mediates the link between task type and textual quality (Erlam, 2015; Maulana, 2021). Strategic competence is cultivated via role-plays engineered with predictable breakdowns that require repair strategies and audience design, echoing findings on interactional dynamics in EFL task execution (Sabaruddin & Melati, 2022; Almefleh et al., 2023). In contemporary classrooms, multimodal competence is indispensable (Paula et al., 2024; Hima et al., 2021). Microteaching within TBLT cycles—plan, enact, reflect—allows PIL candidates to calibrate task complexity, differentiate support, and iterate through task repetition to consolidate accuracy without sacrificing fluency (Khosiyono, 2021; Paula et al., 2024; Ellis, 2018).

Digital competence amplifies these gains when it is woven into tasks rather than bolted on. Collaborative documents, discussion boards, and messaging platforms create authentic interactional spaces where learners must manage turn-taking, netiquette, and asynchronous/synchronous norms—core elements of strategic competence (Dippenaar et al., 2024). Access to digital corpora, dictionaries, and concordancers supports data-driven noticing of Indonesian collocations, affix patterns, and discourse markers, enriching linguistic and discourse competence through contextualized exploration (Šmitienė et al., 2024; Akinyi et al., 2024). Multimodal authoring tools—audio narration, subtitling, screen capture—push deliberate choices about register, emphasis, and cohesion across modes, cultivating multimodal competence and reflective design thinking (Mah, 2016). Learning analytics add a complementary layer: participation traces and contribution clarity supply actionable feedback that augments teacher judgment and helps learners iteratively improve interactional effectiveness (Jin et al., 2025; Suraworachet et al., 2023). Finally, curating credible sources and attributing them properly sharpens audience awareness and stance-taking in digital discourse, sustaining academic integrity and critical engagement (Ulloa et al., 2022).

This study enters that nexus of need and possibility by proposing a locally adapted TBLT framework that targets Indonesian-specific pragmatics and discourse while building assessment literacy and integrating equitable, tech-mediated participation. The research has two objectives: first, to examine the extent to which a TBLT sequence integrated with digital literacy improves IL learners' communicative competences—linguistic, discourse, strategic, and multimodal—in authentic tasks; second, to investigate how pre-service Indonesian Language (PIL) learners respond to, enact, and adapt this integrated sequence in ways that sustain communicative outcomes under real classroom constraints. The study's novelty lies in coupling explicit socio-pragmatic focus-on-form for Indonesian address systems and particles with genre-based task families, multimodal production, and analytics-informed feedback, operationalized through flexible digital options—an integration not foregrounded in earlier local implementations (Ismail, 2017; Maulana, 2021; Widanta, 2023). Guided by this design, the research asks: To what extent does TBLT integrated with digital literacy promote PIL learners' linguistic, discourse, strategic, and multimodal competences? How do PIL learners perceive and adapt the integrated TBLT–digital literacy model to meet communicative goals amid varying pressures of assessment, class size, and technology access?

RESEARCH METHOD

Research Design

This study employs a mixed-methods explanatory sequential design: a quantitative phase (pre–post measurement of communicative competences after a TBLT–digital literacy intervention) followed by a qualitative phase (observations and interviews to explain and elaborate the statistical patterns). This design is suited to the study objectives and research questions because it (a) tests whether the integrated TBLT model is effective at scale (quan) and then (b) uncovers *how* and *why* observed gains occur in authentic classrooms (qual)—for example, which task features, digital supports, or classroom contingencies most strongly shape learners' linguistic, discourse, strategic, and multimodal competences. The design also

aligns with the manuscript's context and aims—linking principled task cycles to digital practices—so that numeric learning gains are interpreted through pedagogical mechanisms visible in classroom processes and learner narratives.

The limitations and mitigation of the study are seen. First, a single-program sample may constrain generalizability; we mitigate this through thick description of setting, participants, and intervention so readers can judge transferability. Second, absence of random assignment raises selection bias concerns; we address this by collecting baseline covariates (e.g., prior GPA, entrance test scores) and using gain scores and, where appropriate, analysis variance to partial out initial differences. Third, observer and Hawthorne effects are possible during observations; we use non-participant observation after an acclimation period, standardize observation protocols, and triangulate fieldnotes with artifacts (student products, LMS traces). Fourth, social desirability bias may influence interviews; researchers minimize this with neutral prompts, interviewer training, and member-checking of synthesized themes. Finally, instrumentation bias is managed via piloting, expert review, and reliability checks (internal consistency for scales; inter-rater indices for performance rubrics).

Research Participants

The participants are 25 pre-service Indonesian Language (PIL) teachers enrolled in an Indonesian Language Education study program. Selection criteria: active enrollment in semesters 5–7 (upper-division pedagogy/microteaching readiness), completion of at least one course in language teaching methodology, no prior formal TBLT practicum, and consent to participate across both phases. Sampling used purposive-convenience procedures in coordination with program coordinators to ensure availability for the full intervention cycle. Typical age range is 19–24 years; participants report Indonesian as L1 with varied regional dialect backgrounds; most have prior experience using common productivity and messaging platforms (e.g., Docs, LMS forums, chat apps). We record gender, age, semester, GPA band, and prior exposure to TBLT or digital literacy modules to characterize the cohort and to use as covariates in quantitative models. Participation is voluntary with the right to withdraw at any time without penalty.

Instruments

Two parallel pre–post performance assessments (speaking and writing) are built around TBLT-aligned tasks (e.g., planning a formal announcement; negotiating a service; producing a short multimodal PSA with captions). Each uses analytic rubrics capturing; linguistic competence (accuracy/appropriacy of affixes, pronouns, particles); discourse competence (cohesion, coherence, genre moves); strategic competence (repair, clarification, audience design); and multimodal competence (integration of text–image–audio, design coherence). Rubrics were adapted from established communicative frameworks and tailored to Indonesian socio-pragmatics through expert review (two senior lecturers in Indonesian pragmatics and language assessment), with a pilot on a comparable cohort to refine descriptors and task prompts.

A structured classroom observation checklist documents TBLT fidelity (pre-task/task/post-task phases, focus-on-form episodes), digital integration (tools used, scaffolding, cognitive load management), and learner engagement (on-task talk, negotiation of meaning, repair moves). Low-inference indicators (e.g., frequency counts of clarification requests; presence/absence of captions in student videos) reduce subjectivity. Observers undergo calibration using sample videos. A semi-structured interview protocol (30–45 minutes) explores learners' perceptions of task difficulty, usefulness of digital supports, repair strategies they adopted, and perceived transfer to authentic communication. The guide was iteratively refined after the pilot to ensure clarity and to avoid leading questions. Audio-recorded interviews are transcribed verbatim for analysis.

Data Analysis

The data of the study consist of quantitative and qualitative data. The data of quantitative are analysed quantitatively. Descriptive statistics summarize pre–post performance across the four competence domains. Assumption checks (normality via Shapiro–Wilk; outliers via robust criteria) determine test choice. Primary inferential tests include paired-samples t-tests (or Wilcoxon signed-rank if non-normal), standardized gain and effect sizes. Where baseline differences are salient, t-test analysis estimate adjusted posttest means (pretest as covariate). Subgroup explorations (e.g., prior digital familiarity bands) are reported cautiously with multiplicity control.

The qualitative data are analysed qualiatively. Interview transcripts, observation fieldnotes, and student artifacts undergo thematic analysis (inductive–deductive). Open coding to identify salient segments such as repair rehearsals, captioning as planning, and over-scaffolding. Afterwards, axial coding to link codes into categories such as task-conditioned noticing, digital mediation of stance, and equity scaffolds. Finally, theme development connecting categories to the four competences and to quantitative findings (explanatory integration). Credibility is strengthened via triangulation (cross-source corroboration), peer debriefing with a methods colleague, and member checking of synthesized theme statements with a subset of participants. An audit trail (codebook versions, analytic memos, decision logs) supports dependability and confirmability.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

The Use of TBLT Integrated with Digital Literacy in Promoting PIL Teachers' Communicative Competences

The quantitative strand gathers data through standardized communicative performance tests aligned to five domains: linguistic competence, multimodal competence, pragmatic competence, discourse competence, and strategic competence. Each assessment elicits authentic task output—speaking, writing, and multimodal artifacts—scored with analytic rubrics to ensure reliability and comparability across participants. Measures capture accuracy, appropriacy, cohesion, genre moves, repair strategies, and orchestration of text–image–audio. Aggregated scores offer descriptive and inferential insights into overall proficiency and domain-specific profiles among pre-service Indonesian Language (PIL) teachers. To support interpretation and facilitate comparison across cohorts, the distribution of PIL teachers' communicative competence results is visualized succinctly in Figure 1 below.

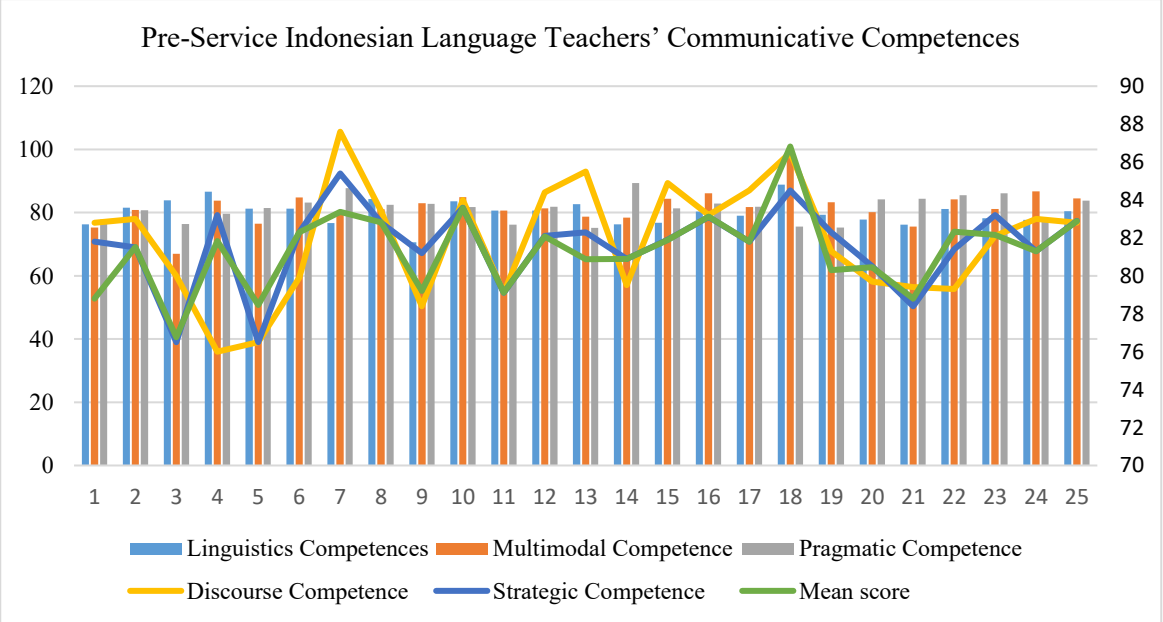

Figure 1. Pre-service Indonesian Language Teachers' Communicative Competences

The data showed overall performance sits solidly in the proficient band, with the grand mean of the five indicators at 81.34. The linguistics competences indicator averages 80.09, while the four theoretically aligned components center tightly around the low-80s: Linguistic competence 81.69, Pragmatic 81.42, Discourse 81.87, and Strategic 81.62. Two patterns stand out. First, discourse competence shows the highest central tendency, suggesting that learners are relatively strong in organizing ideas, managing cohesion, and producing genre-appropriate texts or talk. Second, strategic competence is the most consistent domain (smallest spread), indicating broadly shared control of repair moves, clarification requests, and audience design—skills that tend to generalize across tasks once learned. These macro-patterns support the idea that the cohort can "make meaning" effectively and maintain interaction when minor breakdowns occur.

At the same time, the dispersion within linguistic competence is notably larger than in other domains, driven by a very low score (67.0) for one learner and an unusually high score (98.6) for another. This wider spread (SD ≈ 5.52; IQR 79.5–84.4) implies uneven control of form-focused resources (e.g., affixes, pronouns, particles) across individuals. Pragmatic competence also shows moderate variability (SD ≈ 3.90), pointing to differences in how well learners manage Indonesian-specific address terms, register shifts, and discourse markers in context. A small set of outliers is visible across indicators using a Tukey IQR check: for example, the first indicator flags 70.6 and 88.9 as outliers, linguistic competence flags 67.0 and 98.6, and strategic competence flags a few low scores (two at 76.5 and one at 78.4). These outliers matter practically: they reveal that while the group average is healthy, tail learners may require targeted support—especially those with weaker linguistic baselines that could constrain their otherwise adequate discourse or strategic performance.

PIL Responses to the TBLT Integrated with Digital Literacy Model to Meet Communicative Goals Amid Varying Pressures of Assessment, Class Size, and Technology Access

In qualitative data, researchers interviewed 15 PIL teachers dealing with the implementation of TBLT integrated with digital literacy in improving their communicative competences. The interview questions designed in 7 questions.

Table 1
Interview Questions of the Implementation of TBLT Integrated with Digital Literacy

No	Interview Questions
1	When working toward specific communicative outcomes, what aspects of the integrated TBLT–digital literacy model felt most helpful or hindering, and why?
2	Under assessment pressure (e.g., graded performances, limited time), how did you adapt task strategies or tool use to maintain intelligibility, coherence, and appropriateness?
3	In large or mixed-ability classes, what concrete adjustments (grouping, role design, peer support, rubric use) did you make to keep tasks communicative and equitable?
4	How did technology access (bandwidth, devices, platform constraints) shape your task choices, and what low-tech or offline substitutions did you employ?
5	Describe a moment of communicative breakdown: which repair strategies and digital supports did you use, and how did they affect the outcome?
6	How did multimodal requirements (text–audio–image/video) influence your planning, audience design, and focus-on-form decisions during and after tasks?
7	Looking ahead, which adaptations would you retain, modify, or discard to better balance assessment demands, class size realities, and technology limitations?

The points of interview refer to helpful and hindering aspects, adapting under assessment pressure, adjustments for large/mixed-ability classes, technology constraints and low-tech substitutes**,** handling communicative breakdowns, Impact of multimodal

requirements, Future adaptations to balance constraints. The PIL teachers' responsed can be concluded as follows.

Helpful vs. hindering aspects

Most of us found the clear task cycle (pre-task modeling → task → post-task reflection) plus checklists for repair moves the most helpful because they kept us focused on outcomes rather than activities. Digital affordances—shared docs for co-writing, captions/transcripts for comprehension, and version history—made collaboration visible and accountable. Hindrances arose when tools multiplied (LMS + chat + slides + video editor), creating cognitive load; we did better when the toolset was standardized and when prompts explicitly tied each tool to a communicative purpose (e.g., "use comments only for clarification requests").

Adapting under assessment pressure

With time limits and grading stakes, we front-loaded planning with template organizers (hook–purpose–evidence–close), reduced slide counts, and scripted key discourse markers to preserve coherence. We also used "plain-language first, upgrade after" drafting: produce intelligible text/audio, then layer form-focused edits (pronouns/affixes, register particles). For speaking tasks, we practiced 30-second "elevator" summaries and kept a bank of confirmation checks ("Jadi maksud Anda…?") to maintain appropriateness while moving briskly.

Adjustments for large/mixed-ability classes

We formed triads with rotating roles (lead speaker, clarifier, summarizer) so every learner had a communicative function. Heterogeneous grouping paired stronger discourse planners with peers needing support in linguistic accuracy. We used color-coded rubrics (green = intelligibility, blue = cohesion, orange = pragmatics) so peers could give targeted feedback without overwhelming each other. Stations worked well: one for rehearsal/recording, one for rubric peer-review, one for micro focus-on-form, reducing whole-class bottlenecks.

Technology constraints and low-tech substitutes

Bandwidth shaped modality: low-bandwidth groups submitted audio + transcript instead of video; we compressed files and used offline slide exports (PDF) shared later. When devices were scarce, we ran "paper-to-digital relays"—storyboards and written scripts first, then one group device recorded the final take. WhatsApp voice notes replaced synchronous meetings; printed cue cards replaced teleprompters. We prioritized tools with offline modes (Docs offline, local recording apps) and synchronized when connectivity returned.

Handling communicative breakdowns

In one negotiation role-play, an unexpected colloquial expression stalled the exchange. The speaker used repair strategies—clarification request, paraphrase attempt, and an example prompt—while a teammate searched our shared glossary on a phone. The quick check restored common ground, and the summary speaker closed by reformulating the agreement in simpler terms. Post-task, we added the expression to our "watch list" and rehearsed two alternative phrasing options to prevent recurrence.

Impact of multimodal requirements

Knowing we had to integrate text–audio–image changed planning: we storyboarded message flow before drafting language, then aligned visuals to rhetorical moves (problem → evidence → call-to-action). Captions forced precision with pronouns and particles; recording audio exposed prosody and register issues we missed in writing. During post-task focus-on-form, we used auto-captions to spot mispronunciations and adjusted scripts accordingly. Audience design sharpened: for formal audiences we muted emojis/colloquialisms and tightened cohesion; for peers we allowed more interpersonal markers.

Future adaptations to balance constraints

We would retain the standardized task cycle, role rotation, and color-coded rubrics; they reliably kept interaction communicative and equitable. We'd modify the digital stack to a "core trio" (docs + slides + one messaging channel) and schedule "offline first" drafting days. We'd discard overproduced video requirements when they don't add communicative value. Assessment will shift toward fewer but richer performances with clear criteria and brief focus-on-form interludes. Finally, we'll keep tiered

supports—micro-drills for accuracy, challenge conditions for high performers—to accommodate class size and tech variability.

Discussion

The discussion interprets a convergent pattern across the research data: pre-service Indonesian Language (PIL) teachers achieved consistent gains at a proficient level overall, with discourse and strategic competences emerging as the most stable domains, while linguistic, modality, and pragmatic competences showed wider between-learner variance. Situating these results within prior TBLT scholarship clarifies both mechanism and boundary conditions. Our finding that discourse competence has the highest central tendency accords with evidence that task cycles compel macro-organization, audience management, and cohesion, thereby strengthening discourse outcomes even when morphosyntax remains uneven (Takač & Ivezić, 2019; Vold, 2022). Likewise, the tight spread in strategic competence echoes claims that repair routines and confirmation checks, once socialized in interaction, generalize robustly across tasks and modalities (Rabab'ah, 2015; Milliner & Dimoski, 2022). Together, these patterns suggest that the integrated model first stabilizes "interactional scaffolding" before it fully consolidates fine-grained form control—an order of effects consistent with classroom-based TBLT trajectories reported in Southeast Asian contexts (Ismail, 2017; Marzuki, 2022).

The relatively larger dispersion in linguistic and pragmatic scores is also theoretically expected. Earlier Indonesian studies document that even advanced learners who master affix inventories (meN-, -kan, -i) struggle to deploy them swiftly in spontaneous speech or to choose pronouns and particles appropriate to interlocutor, setting, and stance (Defina, 2018; Bram & Angelina, 2022). Longitudinal work cautions that apparent gains in fluency can mask stagnant or fragile accuracy—an "illusion of progress" if tasks are not followed by targeted focus-on-form and planned re-tasking (Long, 2021). Our qualitative evidence that learners benefitted from post-task language reflection, caption-prompted revisions, and brief, data-driven noticing aligns with this view and with Indonesian repetition studies showing that accuracy catches up when similar outcomes are attempted under varied conditions (Khosiyono, 2021). The implication is not that discourse-first gains are superficial, but that they create the conditions—motivation, audience awareness, communicative pressure—under which form-focused work becomes meaningful and hence learnable.

A second strand of interpretation concerns the digital layer. The integrated use of collaborative documents, captions/transcripts, and limited analytics strengthened strategic routines (turn-entry, clarification, reformulation) and made discourse organization visible to peers. This mirrors findings that digital scaffolds enhance self-regulated planning and feedback loops in language tasks when tool use is purpose-bound rather than tool-led (Mah, 2016; Suraworachet et al., 2023). Our participants reported that auto-captions exposed pronunciation and register issues they had missed—an effect consistent with studies where multimodal authoring surfaces latent form-function mismatches and prompts repair (Paula et al., 2024). The selective use of analytics to track participation and contribution clarity also reflects broader learning-analytics literature showing that timely, interpretable traces can nudge productive engagement while avoiding data overload (Akinyi et al., 2024; Jin et al., 2025). At the same time, teachers flagged cognitive load when the digital stack proliferated; slimming to a "core trio" of tools improved focus—converging with reports that excessive platform switching depresses task engagement (Xue, Huang, & Liu, 2022).

Our qualitative themes about equitable participation under resource constraints bring a further layer of comparison. Prior Indonesian and regional work has noted that large mixed-ability cohorts and uneven bandwidth can push classes toward low-challenge activities or, conversely, toward tech-heavy assignments that privilege already-advantaged learners (Sundari, Miranti, & Sulaeman, 2021; Maulana, 2021). In contrast, the current cohort

maintained communicative intent through triads with rotating roles, low-bandwidth alternatives (audio + transcript in place of video), and "paper-to-digital" relays. These adaptations resonate with teacher-agency accounts from pandemic-era TBLT, where task purpose—not tool novelty—was the anchor for inclusion (Birrina & Emaliana, 2022). Practically, our data suggest that role-based grouping and offline-first planning are not mere stopgaps; they are pedagogic levers that preserve interactional depth while distributing cognitive and technical demands.

Comparing our findings to earlier classroom reform attempts clarifies what the integrated model adds. Programs that introduced "communicative activities" without a coherent pre-/during-/post-task sequence often lifted time-on-task but did not reliably move accuracy or pragmatics (Erlam, 2015). By contrast, our participants tied their improvements to the clarity of the task cycle and to post-task focus-on-form keyed to errors that actually arose in performance. This is consonant with modular task curricula advocating principled focus-on-form episodes and re-tasking rather than free-floating activities (Ellis, 2018). Moreover, where flipped or digitally enhanced lessons improved outcomes in higher education, meta-analytic gains were largest when digital work primed or extended task phases rather than replaced them (Chen et al., 2023). Our teachers' preference for an "offline-first" drafting day, followed by targeted digitalization, fits that pattern: technology served the task, not the other way around.

Theoretically, the discussion points to a mediated account of development: task pressure organizes discourse and strategy first; digital traces and multimodal artifacts make performance inspectable; brief, locally relevant focus-on-form then consolidates morphosyntax and pragmatics. This sequencing refines TBLT's claims for Indonesian: it foregrounds socio-pragmatic specificity (address terms, particles, register shifts) as legitimate targets of post-task attention, something often under-addressed in generic TBLT descriptions. It also underscores that multimodal competence is not ancillary; it is a site where form, meaning, and design co-evolve as learners plan for audiences and channels. Practically, this entails designing rubrics that weight intelligibility, coherence, and appropriateness alongside accuracy, and that explicitly value multimodal orchestration when tasks demand it.

There are caveats. The single-program sample tempers generalizability, and the absence of random assignment leaves room for selection effects. Yet our design choices—gain scores, covariate collection, and explanatory qualitative follow-up—are commensurate with classroom realities and mirror best practices in applied settings (Ismail, 2017; Marzuki, 2022). A further limitation is potential rater drift in analytic scoring; our use of calibration sessions and inter-rater checks mitigates but does not eliminate this risk. Finally, while the overall mean near 81 indicates solid proficiency, the tails in linguistic and pragmatic domains caution against assuming uniform readiness for high-stakes communicative tasks without targeted scaffolding.

Taken together, the study contributes three actionable insights. First, stabilizing discourse and strategic competences early through clear task cycles creates the breathing room needed for subsequent accuracy and pragmatics work; curriculum planners should therefore resist collapsing post-task reflection when time is tight. Second, a minimalist, purpose-bound digital stack enhances—not dilutes—TBLT's mechanisms by externalizing performance and enabling light-touch analytics and captions that cue repair and refinement. Third, equity-by-design practices—role rotation, offline-first planning, and low-bandwidth alternatives—are not only ethically necessary but pedagogically beneficial, sustaining communicative depth across heterogeneous cohorts. These implications refine how TBLT integrated with digital literacy can be locally operationalized in Indonesian teacher education, extending prior accounts by specifying the sequence, the socio-pragmatic foci, and the minimal digital supports most likely to yield durable gains.

CONCLUSION

This study set out to examine whether an integrated TBLT–digital literacy sequence could strengthen PIL learners' communicative competences—linguistic, discourse, strategic, and multimodal—and to understand how they perceive and adapt the model under real classroom constraints. The mixed-method, explanatory-sequential design converged on a clear pattern: overall proficiency rose to a consistently "proficient" band, with discourse and strategic competences emerging as the most stable gains. These domains benefited from the clarity of the task cycle (pre-task priming, task performance, post-task focus-on-form) and the purposeful use of digital scaffolds (collaborative documents, captions/transcripts, light analytics) that externalized planning, made interactional moves visible, and supported rapid repair. At the same time, variance in linguistic and pragmatic scores revealed uneven control of affixes, pronouns, particles, and register-sensitive choices—areas that improved most when post-task episodes targeted forms that actually surfaced during performance. Qualitative accounts confirmed that triadic roles, offline-first drafting, and standardized toolsets reduced cognitive load and widened equitable participation without diluting communicative intent.

The study contributes a locally grounded blueprint for implementation and a set of practical guardrails. Theoretically, it specifies an order of effects—strategy and discourse first, accuracy and pragmatics next—that helps reconcile observed classroom trajectories with TBLT claims in contexts with exam pressure, large classes, and uneven connectivity. Practically, it shows that a minimalist, purpose-bound digital stack, role-based grouping, and low-bandwidth alternatives are not just contingency plans but productive design choices that preserve communicative depth and widen access. Limitations—single-program sampling, non-random assignment, and potential rater drift—temper generalizability but are offset by transparent procedures (gain-score analyses, rater calibration, triangulated qualitative follow-up). Future work should test the sequence in varied institutional settings, incorporate delayed post-tests to probe durability, and experiment with micro-interventions that directly target high-variance features (e.g., affix selection under time pressure, pronoun/particle choices across registers).

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INFORMED CONSENT STATEMENT

All participants provided informed consent after receiving a plain-language explanation of the study's purpose, procedures, potential risks/benefits, data uses, and their rights. Participation was entirely voluntary, with the option to decline or withdraw at any time without penalty. Confidentiality was protected through pseudonyms and secure data storage, and only the research team had access to identifiable information. The study protocol and consent process were reviewed and approved by the institutional ethics committee prior to data collection.

DATA AVAILABILITY STATEMENT

The datasets generated and analyzed during this study contain personally identifiable educational records and cannot be shared publicly to protect participant confidentiality. De-identified summary data, codebooks, scoring rubrics, and analysis scripts are available from the corresponding author upon reasonable request, contingent on a data-use agreement consistent with ethics approval and participant consent. Copies of the communicative tests, observation checklists, and interview protocols can also be provided on request.

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