

THE EFFECTIVENESS OF USING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN CONDUCTING NATIVE LANGUAGE LESSONS

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Abstract. This article examines how artificial intelligence (AI) can enhance teaching and learning in native language lessons, where the aims typically include advanced literacy, critical reading, rhetorical competence, vocabulary development, grammatical precision, oral fluency, and literary interpretation. Effectiveness is discussed not as a slogan but as demonstrable improvements in learning outcomes, instructional efficiency, equity of access, and teacher workflow. The paper synthesizes mechanisms through which AI produces gains—high-frequency formative feedback, adaptive practice, multimodal supports, data-informed instruction, and learner metacognition—then maps these mechanisms to concrete classroom uses in reading, writing, speaking/listening, and literature studies. It also addresses risks (bias, privacy, overreliance, academic integrity) and offers implementation guidance grounded in pedagogy (TPACK, SAMR, formative assessment) and research design (valid metrics, comparison groups). **Keywords:** Artificial intelligence; native language instruction; literacy; formative assessment; feedback; adaptive learning; educational technology; writing analytics.

INTRODUCTION

Native language lessons differ from foreign language classes in both goals and baseline proficiency. Here, the challenge is not survival communication but higher-order literacy: analyzing arguments and narratives, writing with voice and structure, mastering conventions, and speaking with clarity and rhetorical force. Traditional constraints—limited time for individualized feedback, heterogeneous abilities within the same class, and the slow cycle from drafting to quality revision—make these goals difficult to achieve at scale. AI technologies, from large language models (LLMs) and automated speech recognition (ASR) to essay analytics, knowledge-tracing systems, and multimodal tools, promise to relieve these constraints by providing immediate, targeted feedback; generating varied practice; scaffolding complex tasks; and surfacing actionable insights for teachers. Effectiveness, however, depends on fit-for-purpose design. AI should be aligned to curriculum standards, assessment rubrics, and the cognitive processes that actually produce literacy gains—retrieval, elaboration, deliberate practice, feedback timing, and self-explanation—rather than serving as a novelty layer on top of unchanged routines.

MATERIALS AND METHODS

The first indicator of effectiveness in native language lessons is the quality and timeliness of feedback. Writing improvement hinges on short feedback loops, yet teachers cannot comment in depth on every sentence for every student, every day. AI-assisted feedback systems make the loop both faster and more frequent by flagging issues at multiple levels: sentence clarity, cohesion, rhetorical moves, grammar and mechanics, and genre conventions. When tuned to rubrics and exemplars, such systems can offer criterion-referenced suggestions (“Your introduction states a claim, but the warrant is implicit; make it explicit with a because-statement”) rather than generic praise or surface-level edits. Crucially, the most robust gains occur when feedback is dialogic: students receive a suggestion, justify whether they accept it, and revise with a rationale (“metacognitive annotation”). This keeps agency with the learner and turns AI from an editor into a thinking partner that prompts explanation, the cognitive act most correlated with durable learning [1].

A second effectiveness channel is adaptive practice that respects cognitive load and spacing. In vocabulary and grammar, AI can stage items along a difficulty gradient, detect error patterns

(e.g., comma splices versus subordinate clause errors), and schedule spaced retrieval of troublesome forms. In reading comprehension, adaptive question sets can move beyond literal recall to inference, author's purpose, tone, and argument structure, with dynamic scaffolds that appear only when needed—keyword highlighting, sentence-combining practice, or short model paragraphs that illustrate a rhetorical move. For advanced readers, AI can generate contrastive passages—two texts making opposing claims about the same theme—so students practice synthesis and counterargument, skills central to native language curricula. The key is that adaptivity is transparent: students see why an item surfaced and how their performance changes subsequent tasks, reinforcing self-regulation rather than obscuring it behind a black box [2].

RESULTS AND DISCUSSION

Third, AI expands multimodal support without diluting rigor. ASR and text-to-speech (TTS) tools help students with dyslexia or attention difficulties sustain engagement with complex texts by offering controllable pacing, prosody modeling, and instant replay of dense sentences. For oral language, AI can transcribe student speeches, highlight filler words, detect pacing and pausing, and visualize intonation contours; students then iterate on delivery with concrete targets. In literature study, image-text models can create concept maps of motifs, settings, and character relationships drawn from the class's discussion, anchoring close reading in shared artifacts rather than ephemeral talk. These multimodal affordances reduce access barriers while preserving the intellectual demands of interpretation and craft [3].

Fourth, data-informed instruction moves from intuition to evidence. Aggregated analytics—error heatmaps for a class, growth in lexical diversity across drafts, time-on-task patterns by activity, or question types that most often elicit misconceptions—allow teachers to re-sequence lessons, form targeted small groups, and intervene early. The most effective uses are minimalist: a handful of high-signal indicators tied to instructional decisions. For example, a weekly “revision quality index” (e.g., proportion of meaning-changing revisions versus surface edits) is more actionable than dozens of dashboard dials. Similarly, in reading, tracking the distribution of question levels across Bloom's taxonomy prevents over-reliance on recall items and nudges teachers toward higher-order prompts.

Fifth, AI can catalyze richer writing and speaking tasks by lowering friction at the brainstorming and planning stages while preserving the heavy lifting for students. Structured prompting routines—topic narrowing, audience definition, claim-evidence-reasoning planning, and counterargument anticipation—help students get to the “first draft of thought” faster. From there, guardrails ensure that generative text is not a shortcut but a comparator: students pit their paragraphs against an AI model's draft, critique its reasoning, identify clichés, and then revise to exceed it. This “beat the model” pedagogy flips a risk (mindless copy-paste) into a productive foil that demands voice, specificity, and superior evidence use.

The native language classroom is also a civic space. AI's effectiveness extends to argument literacy and media evaluation. Fact-checking scaffolds that surface claims, evidence, and rhetorical devices in op-eds or social posts train students to interrogate sources. Bias-profiling tools, used carefully, can help detect loaded language, euphemisms, and framing effects; students then rewrite passages to alter tone or stance, making stylistic choices visible. Over time, this builds transfer: students learn to read as writers and write as critical readers, a hallmark of advanced literacy in one's first language [4].

Equity and inclusion are not afterthoughts; they are core tests of effectiveness. AI can help differentiate instruction for mixed-ability classes by providing multiple pathways to the same standard: scaffolded texts with stable core ideas but variable sentence complexity; choice boards that pair audio annotations with close-reading tasks; and micro-conferences where students practice a skill with an on-demand coach before meeting the teacher. For dialect-speaking students, AI can validate home varieties while teaching code-switching pragmatics: systems can identify dialectal forms, discuss register and audience, and support rhetorical decisions without

pathologizing linguistic identity. When these tools are used to dignify students' linguistic repertoires, outcomes improve not just in test scores but in engagement and persistence.

Assessment demands particular care. AI-supported formative assessment can accelerate learning—automated item generation for retrieval practice, rubric-aligned draft feedback, oral proficiency analytics—but summative integrity must be preserved. Effective classrooms separate process-rich tasks (drafting with visible revision history, oral defenses of writing choices, timed in-class reflections) from final evaluations where unauthorized AI use would undermine validity. Teachers can also design “AI-contingent” assignments: students must include a model-response critique, prompt-engineering log, and an originality statement explaining where and why they accepted or rejected AI suggestions. This turns academic integrity from policing into pedagogy [5].

Despite these benefits, risks are real. Models can hallucinate facts, reflect societal biases, and over-correct for non-standard varieties; privacy breaches are possible if student data are mishandled; overreliance can atrophy independent writing stamina. Effective mitigation weaves together policy and practice: locally hosted or privacy-compliant tools; clear data-retention rules; bias audits using diverse corpora; “trust but verify” routines that require source checks; and explicit instruction in AI literacy so students understand both power and limits. Above all, the teacher remains the epistemic authority, curating when and how AI appears, and modeling critical stance toward its outputs.

Implementation determines impact. Schools that see the largest gains approach AI through pedagogy, not procurement. Teachers map tools to standards, plan with TPACK (technological, pedagogical, content knowledge) to ensure technology serves the learning goal, and use SAMR as a sanity check: substitution is fine for efficiency, but the aim is modification and redefinition—tasks previously impractical become routine (e.g., real-time discourse analysis of a seminar to improve talk moves). Professional learning focuses on two tracks: craft (designing prompts, calibrating rubrics, orchestrating revision cycles) and ethics (privacy, bias, integrity). Infrastructure choices favor reliability and simplicity; fewer, well-integrated tools beat many siloed ones. Family communication clarifies what AI will and will not do, building trust [6].

CONCLUSION

AI delivers its best results in native language lessons when it amplifies what we know works: timely, specific feedback; deliberate practice with spacing and retrieval; rich discourse and writing with authentic audiences; and teacher judgment at the center. Used this way, AI narrows feedback gaps, personalizes challenge, widens access, and frees teacher time for the high-value human work of modeling, conferring, and cultivating taste and voice. The goal is not to mechanize literacy but to deepen it—turning faster feedback into slower, more thoughtful prose; turning adaptive prompts into stronger arguments; turning dashboards into wiser instructional choices. With careful design, clear guardrails, and a commitment to equity, AI can make native language classrooms both more humane and more effective.

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