

The Potential of Problem-Based Learning Applied in Chinese Vocational College English Classroom

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Abstract: Problem-based learning (PBL) organizes learning around authentic problems that trigger prior knowledge, articulate learning needs, and drive small-group inquiry toward an evidence-based solution, with teachers acting as facilitators rather than lecturers. In English as a Foreign Language (EFL) settings, recent reviews and meta-analyses report overall benefits for achievement, critical thinking, and attitudes, though effect sizes vary with assessment and fidelity of implementation. For Chinese vocational colleges, PBL's potential lies in its alignment with competence-based, workplace-oriented English curricula and with national reform emphasizing "learning by doing" and school-enterprise cooperation. This paper synthesizes evidence on PBL for EFL, interprets it for the vocational English context in China, and proposes an implementation narrative suited to short cycles and large classes while identifying research gaps in measurement, scalability, and cost-effectiveness.

1. Introduction

In vocational English classrooms, students must transfer language knowledge to authentic communicative tasks such as service encounters, safety briefings, or email/instant-message exchanges with clients and supervisors. PBL is well-positioned to catalyze this transfer because it makes the problem-rather than the textbook unit-the driver of learning, requiring learners to interrogate context, source and appraise information, and justify choices in English [1]. In a typical cycle, a compact workplace trigger (e.g., a customer complaint with incomplete details or a shift-handover note with ambiguous instructions) obliges students to determine what they do and do not know, formulate search queries, compare candidate formulations for register and stance, and defend a final response that balances accuracy, politeness, and risk communication-all while negotiating roles and time constraints that mirror real work. Meta-analytic evidence in EFL shows generally positive outcomes for achievement and higher-order skills, and studies comparing PBL with traditional formats in Chinese tertiary EFL suggest deeper student engagement and more explicit reasoning about language choices; classroom discourse tends to shift from teacher explanation to mediated questioning, and students articulate warrants for collocations, tone, and genre moves more frequently [1-3,6]. What remains to be clarified is how these benefits carry over under vocational constraints such as short teaching cycles, mixed proficiency, and crowded timetables; specifically,

whether compact two-to-three-session PBL loops, shared process-and-product rubrics, and brief performance “proofs” (e.g., timed callbacks or SBAR-style briefings) can preserve gains at scale. The present paper addresses this question by translating EFL-PBL evidence to the realities of Chinese higher vocational education (HVE), aligning with scenario-based curriculum standards and reported teacher practices to propose viable designs for large classes and limited contact hours [4-5,7].

2. PBL Fits Vocational College English

The logic of PBL matches the “use-oriented” nature of vocational English: learners work from a compact, realistic trigger (for example, a customer complaint, a logistics delay notice, or a safety incident report), identify what they need to know, and test a response through rehearsal and feedback. In practice, this means the class opens with a brief scenario written at accessible proficiency but dense with cues-stakeholder aims, constraints on tone and timing, and domain-specific lexis-so that students must specify learning issues (terminology, register, discourse moves), locate and evaluate sources, and iterate drafts that satisfy communicative purpose as well as accuracy. The facilitator’s talk emphasizes mediation rather than explanation, pressing for warrants (“Why this mitigation phrase rather than that one?”), prompting comparison across alternatives, and staging short, timed performances-phone callbacks, incident briefings, or email replies-followed by targeted debrief. Meta-analyses in EFL indicate that such problem-centred cycles can improve academic performance, critical thinking, and behavioural engagement, with the strongest gains appearing when inquiry time is protected, scaffolds channel attention to evidence and audience, and the task culminates in a product that mirrors real-world output (emails, oral briefings, reports) [1-3]. To make these gains robust in vocational settings, compact two-to-three-meeting loops can be sequenced across a module, with early cycles providing tighter scaffolding (keyword banks, corpus snapshots, tone checklists) and later cycles shifting responsibility to learners while keeping performance “proofs” and feedback intact [1-3]. In Chinese programs, decades of policy endorsement for task-based approaches and the 2021 English Curriculum Standards for HVE further strengthen the fit: the standards decompose “core literacies” into communicative competences (e.g., task fulfilment under time pressure, register/stance control, intelligibility in service encounters) and professional application scenarios (e.g., reception, safety, after-sales), which PBL can operationalize as solvable, assessable problems within limited contact hours [4-5]. Because these standards emphasize scenario alignment and school-enterprise cooperation, PBL tasks can be sourced from partner workflows and compressed into repeatable micro-cycles that end in observable performances, allowing teachers to document progress with shared rubrics while respecting crowded timetables. In effect, PBL provides the pedagogic machinery to translate the standards’ abstract competencies into concrete classroom routines: authentic triggers, guided inquiry, rehearsal, and feedback that convert practice time into job-ready English within the constraints typical of higher vocational education [4-5].

3. The Evidence Says for EFL

A recent systematic review/meta-analysis (2012-2023) concluded that PBL exerts a positive influence on EFL learners’ achievement, behaviour, and critical thinking, while also noting substantial heterogeneity traceable to differences in task families (problem-solving vs. inquiry projects), proficiency bands, assessment instruments (discrete-point tests vs. performance rubrics), and the fidelity of classroom implementation [1]. In several primary studies included in that review, stronger effects tended to coincide with designs that protected time for guided inquiry, made reasoning criteria explicit, and used performance-based outcomes aligned with the target genre,

whereas studies relying on end-of-unit quizzes or loosely structured “problem discussions” reported smaller or inconsistent gains-patterns consistent with mechanism-sensitive interpretations of PBL [1]. A second, broader meta-analysis and converging experimental work further report that both online and face-to-face configurations of PBL can significantly enhance EFL reading comprehension and learner attitudes, implying not only that the approach is robust across delivery modes but also that blended timetables can offload inquiry and drafting to the LMS while reserving contact time for rehearsal and debrief-an operational advantage for colleges managing crowded schedules [2-3]. Complementing these quantitative syntheses, a comparative classroom study from a Chinese university documents a qualitative shift during PBL sessions: teacher discourse moves from explanation toward mediation, with facilitators asking for warrants, pressing for alternatives, and orchestrating peer critique; simultaneously, students more frequently justify their form-function choices by appealing to audience, register, and corpus-based evidence-behaviours vocational programs aim to normalize because they map directly onto workplace communication demands [6]. Taken together, these findings suggest a design hypothesis for HVE: compact PBL cycles that script facilitator moves (e.g., prompting for warrants, eliciting alternatives, time-boxed debrief) and culminate in authentic deliverables (SBAR-style spoken handovers, complaint-response emails, incident summaries) are well-positioned to convert limited practice time into measurable gains in task fulfilment, register control, and intelligibility, even under short teaching windows and mixed proficiency [1-3,6].

4. Policy and Local Ecology: Opportunity and Constraint

The Ministry of Education’s 2021 HVE English standards and subsequent reform documents emphasize competence benchmarks, scenario alignment, and integration with industry partners, thereby reframing English from a knowledge subject into a performance domain with observable outcomes tied to workplace communication [5]. In practical terms, these policies authorize curriculum maps that begin with professional situations (reception, safety, after-sales, logistics) and backward-design language targets from task requirements-tone, register, intelligibility, and risk communication-while encouraging colleges to co-develop cases with enterprises and to count short, repeatable performance tasks toward credit hours. This policy architecture also legitimizes timetable innovations (e.g., two-to-three-session micro-cycles), small-group rehearsal spaces, and the use of rubrics and portfolios within the LMS as official evidence of competence rather than “supplementary” materials, creating institutional space for PBL as a routine mechanism instead of a one-off innovation [5]. At the same time, case studies of higher vocational English teachers reveal uneven enactment of task-based pedagogy, worries about subjective marking in speaking/writing, and high-stakes testing pressures that pull instruction back toward discrete-point accuracy-factors that can dilute PBL gains if left unaddressed [7]. A viable response is system alignment: shared, scenario-anchored rubrics that make reasoning criteria public; moderation routines where teachers co-mark samples to calibrate standards; micro-PD cycles focused on facilitation talk (prompting for warrants, eliciting alternatives, conducting time-boxed debriefs); and assessment policies that weight process evidence (planning notes, source appraisal, draft-to-final revisions) alongside products (emails, briefings, incident reports). When curriculum standards, teacher development, and assessment rules point in the same direction-valuing how students justify choices and communicate under constraints, not only whether they select the “right” form-PBL’s advantages generalize beyond isolated classrooms and become reproducible at program scale [5,7].

5. Implementation Narrative for Vocational English

A vocationally responsive PBL sequence begins with a short, authentic trigger written at

accessible proficiency but rich in cues: a two-paragraph customer email with ambiguous demands; a shift-handover note with missing details; or a bilingual notice with errors that could cause safety risks. After a brief plenary clarification, groups articulate what is happening and what must be learned to respond. Early in the term, the facilitator models how to turn learning needs into searchable-co-defining keywords, suggesting corpora or bilingual policy sources, and demonstrating how to evaluate register and tone-then progressively fades support as students assume roles: evidence seeker, language checker, synthesizer, and spokesperson. Rather than lecturing “correct English,” the facilitator mainly asks for warrants (“Which phrase mitigates liability while keeping politeness?” “Which corpus frequency supports your collocation choice?”) so that reasoning becomes public and coachable. The cycle culminates in a short performance: a timed phone callback, a written response that meets client constraints, or a brief toolbox talk. Debrief closes the loop by comparing intended and actual language under time pressure and by extracting reusable checklists (tone, stance, legal words to avoid). This compact rhythm (two to three meetings) repeats with escalated complexity across the semester and fits HVE timetables that often allocate limited hours to English. Assessment is folded into the flow. Early iterations emphasize low-stakes feedback on the reasoning path-clarity of learning issues, appropriateness of sources, and trade-offs-before grades carry weight. Later, products gain prominence via common rubrics for task-fulfilment, register control, intelligibility, and risk communication, while brief individual “micro-vivas” ensure fairness in large classes. Where facilities permit, short simulations (e.g., role-played hotline calls) “prove” the plan; where not, audio submissions via the LMS serve as performance evidence. With consistent rubrics and artefact collection, teachers can document growth even under crowded schedules and heterogeneous proficiency.

6. Digital and AI-Supported PBL: Promise with Guardrails

Blended delivery is viable in HVE. Evidence from EFL experiments indicates that online or face-to-face PBL can both enhance reading comprehension and attitudes, allowing colleges to offload inquiry phases to LMS discussion spaces while preserving in-class time for performance and debrief [3]. In a practical workflow, the LMS hosts the compact trigger, a shared “learning-issues” board, and group workspaces where students post candidate sources, corpus snapshots, and draft responses; the facilitator intervenes asynchronously with prompts that press for warrants (“Which guideline or corpus frequency supports this phrasing?”) and scaffolds that narrow the search space without pre-empting inquiry. Class time is then reserved for time-boxed rehearsals-e.g., simulated hotline calls, SBAR-style briefings, or client-response emails read aloud-followed by targeted debrief that compares intended moves with actual performance and extracts reusable checklists (tone, stance, legal risks). This division of labor keeps cognitive load manageable in short teaching windows while generating durable artefacts (evidence tables, draft-to-final revisions, audio submissions) that can be assessed with shared process-and-product rubrics [3]. Systematic reviews on AI-enhanced PBL/TEPBL suggest pragmatic roles for tools: generating candidate search strings for bilingual policy queries, listing alternative tones for customer emails (conciliatory vs. firm), producing pronunciation drills keyed to target phrases, or sketching outline options for an incident report that students then verify and flesh out with trusted sources; however, governance is essential-outputs are provisional and must be checked for accuracy, appropriateness, and privacy [8]. A sensible “light-touch” policy can require students to disclose AI use within submissions (e.g., a brief methods note), mandate human verification of all cited sources and corpus checks, and route AI-assisted work through LMS audit trails so instructors can review prompts, drafts, and revisions. Additional guardrails include prohibiting upload of personally identifiable information, constraining tools to institution-approved platforms, and aligning rubrics so that credit accrues to verified

reasoning (source appraisal, audience analysis, risk anticipation) rather than to fluent but unsubstantiated text. With these practices in place, blended PBL leverages online affordances for inquiry and feedback while protecting in-person time for high-value performance and coached reflection-achieving format flexibility without compromising integrity or learning focus [3,8].

7. Research Agenda for China's Vocational English

Three priorities can move PBL from promise to reproducible practice. First, randomized or strong quasi-experimental trials should target job-relevant outcomes-task fulfilment under time limits, register/stance control, intelligibility in service encounters-rather than only global proficiency [1-3]. Second, instruments need localization: process-sensitive rubrics and performance-based tasks should complement standard tests to “measure where change happens.” Third, pragmatic trials should compare “PBL alone” with “PBL + short simulation” under realistic class sizes and teacher loads, reporting cost and scheduling implications to guide scale-up within the HVE system [4-5,7].

8. Conclusion

PBL has clear potential in Chinese vocational college English because it organizes learning around the very communicative problems graduates will face, and current evidence from EFL supports gains in achievement and higher-order skills when implementation is deliberate and assessment is aligned [1-3]. Under HVE constraints, success depends less on adopting a label and more on orchestration: authentic yet compact triggers, early scaffolding that manages cognitive load, short performance “proofs,” and rubrics that value both process and product within policy frameworks that reward communicative competence [4-5,7]. With targeted research on measurement and scalability-and sensible digital guardrails-PBL can become a repeatable engine for job-ready English in Chinese vocational colleges.

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