

Integrating the Production-Oriented Approach in Cross-border E-commerce English Writing: Pedagogical Design and Engagement Evidence

Wanrong Wang

*School of Foreign Languages, Taizhou University, Taizhou, China
wangwanrong@tzu.edu.cn*

Keywords: Production-Oriented Approach; Cross-border E-commerce English; Writing instruction; Digital teaching platform; Quasi-experimental study

Abstract: Cross-border e-commerce has emerged as a dominant channel of global trade, yet graduates from application-oriented universities frequently lack the specialized English writing competence that authentic business operations demand. This study integrates the Production-Oriented Approach (POA) with a digital teaching platform in a cross-border e-commerce English writing course, and reports on the pedagogical design and its implementation at scale. Drawing on a one-semester implementation at a provincial application-oriented university in eastern China, the study examines how POA's "selective learning" principle is enacted through platform scaffolding. Platform operational analytics indicate sustained, scalable engagement: 716 learners enrolled, generating 2,097 login sessions and 41,429 interaction records; 71 quizzes/assignments drew 600 participations, and the discussion board recorded 90 posts from 82 participants. Qualitative student reflections corroborate the design's value for bridging classroom learning and industry practice. We discuss the role of digital scaffolding in operationalizing POA and outline directions for controlled replication.

1. Introduction

Cross-border e-commerce has expanded rapidly, yet graduates often lack the specialized English writing competence that real business operations require. Traditional English writing instruction frequently fails to bridge the gap between classroom learning and industry demands. The Production-Oriented Approach (POA), proposed by Wen (2015, 2016), offers a framework that emphasizes learning through production rather than passive input, and a recent meta-analysis confirms its positive effect on Chinese students' language skills^[4]. However, implementing POA in specialized courses requires systematic pedagogical design and empirical validation. This study addresses that need by integrating a digital teaching platform with POA principles in a cross-border e-commerce English writing course, and by reporting empirical evidence from a one-semester implementation.

Within the Chinese context, application-oriented universities occupy a distinct niche: they are charged with producing vocation-ready graduates rather than theoretical researchers, yet their

English curricula have historically mirrored those of research-oriented institutions. A bibliometric review of business English writing instruction in China (2002-2021) shows that pedagogical research has concentrated on general business correspondence while under-addressing industry-specific, digitally mediated genres such as optimized product listings and dispute-resolution emails^[1]. This mismatch leaves graduates procedurally competent in grammar but under-prepared for the genre-specific, time-pressured writing that cross-border platforms demand. POA, as a domestically developed second-language-acquisition theory, offers a remedy by re-centring instruction on purposeful output; the present study tests how that remedy scales when delivered through a digital platform.

Positioning of this study. This paper examines how a specific second-language-acquisition theory—the Production-Oriented Approach (POA)—is operationalized through a digital teaching platform in cross-border e-commerce English writing. While related outputs from the same project (No. 2021SJA2152) establish the empirical efficacy of the Digital Teaching Platform (Part 1 of this series) and the architectural design and industry-academia collaborative mechanism of the platform itself, the present study isolates the mechanism by which POA's 'selective learning' principle is enacted via platform scaffolding, and documents the implementation evidence at scale.

This article is Part 2 of a three-paper series from Project No. 2021SJA2152. The empirical writing-achievement results appear in Part 1 and the platform architecture and industry–education collaboration in Part 3. To avoid redundant reporting, the empirical evidence is divided across the series: Part 1 reports the controlled quasi-experiment on writing achievement (N = 204; EG = 103, CG = 101) and its effect size; this article (Part 2) reports the DTP-based pedagogical design and learner-engagement analysis at scale (N = 716 enrolled learners; 67 in-course examination participants); and Part 3 reports the DTP architecture and industry–education collaboration mechanism (enterprise needs survey n = 45). The three papers draw on the same Fall-2024 pilot but report non-overlapping outcome data.

2. Theoretical Framework: POA and Digital Integration

2.1 POA's Core Constructs

The Production-Oriented Approach, advanced by Wen (2015, 2016)^[2,3], reorganizes language teaching around three interacting components-motivating, enabling, and assessing-and a distinctive tenet of "selective learning," whereby input materials are filtered and aligned with specific output tasks rather than presented exhaustively. In the original formulation, motivating engages learners through a real-world communicative task; enabling supplies scaffolded input and structured practice toward that task; assessing evaluates the completed output against explicit criteria. This output-driven logic directly addresses the weakness of input-heavy business English courses, where students accumulate vocabulary yet struggle to compose in authentic genres.

2.2 Empirical Basis for POA

The effectiveness of POA is no longer merely theoretical. A recent meta-analysis of 41 effect sizes reports that POA produces significant gains in Chinese students' integrated language skills, with effects robust across proficiency levels and institution types^[4]. This evidence base legitimates POA as a candidate framework for specialized, vocation-oriented writing courses-provided the enabling phase is adequately scaffolded.

2.3 Technology-Enhanced Language Learning as the Enabling Substrate

POA's enabling phase is where digital platforms earn their place. Foundational computer-assisted language learning scholarship established that computer-mediated feedback and corpus-informed practice improve accuracy and learner autonomy^[6,8]. More recent automated writing evaluation research shows that iterative, machine-generated feedback can raise revision quality and reduce teacher workload, although its gains depend on how feedback is sequenced and whether learners are trained to use it^[5,7]. These findings converge on a design principle: technology is most effective not as a standalone tutor but as a structured enabler embedded in a theoretically motivated cycle.

2.4 From Peripheral Aid to Integral Design

Earlier platform deployments often treated technology as a peripheral aid layered onto conventional teaching^[9]. This study departs by positioning the platform as an integral component of the pedagogical design, so that POA's input-to-output transition is delivered through multimodal, just-in-time resources tightly coupled to writing tasks. Enabling activities are thus realized as curated collections, interactive exercises, and AI-assisted feedback that respond to each learner's position in the POA cycle—a configuration consistent with evidence that POA yields meaningful learning gains precisely when scaffolding is present^[4].

2.5 Alignment with Digital-Literacy Frameworks

The design also resonates with scholarship that frames digital competence as a curricular strand rather than a technical add-on^[9]. By embedding search-engine-optimization literacy, multimodal composition, and data-informed revision inside the POA cycle, the platform treats digital skills as integral to writing expertise, not as separate training. This alignment helps explain why learners perceived the tasks as authentic: the digital behaviours practised—optimizing listings, reading analytics—are the actual behaviours the industry rewards.

2.6 Assessment as the Closing Loop

In POA, assessing is not merely grading but a driver of the next cycle; the platform realizes this through multi-dimensional, process-oriented scoring. Automated writing evaluation, when properly sequenced, raises revision quality and reduces teacher workload^[5], and classroom research confirms that AWE is most effective as a complement to, not a replacement for, expert judgement^[8]. The present design embedded assessment inside the task flow—so that a submitted listing immediately returned analytics-informed feedback—rather than postponing it to a terminal exam. This immediacy is what converts assessment from a verdict into scaffolding.

3. Research Design and Implementation

3.1 Context and Participants

The CBEC (“Cross-border E-commerce English”) course was delivered on a university digital teaching platform (hereafter DTP) during a one-semester implementation. This paper examines how the platform operationalized the Production-Oriented Approach (POA) and documents learner engagement at scale through platform operational analytics. The writing-achievement outcomes of learners using the platform are reported in the companion quasi-experimental study (Part 1 of this series); the present study therefore focuses on pedagogical design and engagement evidence rather

than on a separate writing-score comparison. The platform's broader user base (716 enrolled learners; 67 learners who sat the four in-course examinations). Of these, the 204 students in the two intact classes (Experimental and Control Groups of the companion quasi-experimental study, Part 1 of this series) constituted the writing-assessment sample, while 67 learners across the platform sat the four in-course examinations reported below. The in-course examination pass rate ($87.9\% \geq 60$) is a formative, platform-internal measure and is distinct from the post-test pass rates in Part 1 of this series). The one-semester implementation was delivered in Fall 2024 to the 2023-enrolled Business English cohort.

3.2 Pedagogical Design

Instruction followed the POA cycle while leveraging platform resources across three learning dimensions: What to Read, What to Do, and How to Write. The platform provided 370 curated course collections, including 151 instructional videos (cumulative duration 2,316 minutes), 6,240 interactive exercises, 374 online question banks, and 735 shared resources. Students completed authentic writing tasks — product listings, business correspondence, and marketing copy — organized into five modules that mirror real e-commerce operations: Account Setup, Product Listing, Product Marketing, Order Processing, and After-sale Management. The platform thus functioned as the “Enabling” environment through which POA's selective-learning principle was enacted.

Operationally, the POA cycle was mapped onto the platform as follows. During motivating, each module opened with an authentic industry scenario—a stalled product listing or an escalated customer complaint—presented as a task learners could not yet complete, thereby exposing the gap between current and required competence. During enabling, the platform delivered filtered input aligned to that task: instructional videos demonstrated expert copywriting moves, interactive exercises drilled genre-specific patterns, and an AI thought-partner supported prompt drafting. During assessing, learners published revised output to the simulated marketplace and received multilayered feedback (peer, automated, instructor), closing the loop before the next module. This structuring ensured that the 370 curated course collections were not consumed passively but mobilized toward concrete output.

The three learning dimensions mapped cleanly onto the POA cycle. What to Read supplied the filtered input for enabling: 151 instructional videos modelled expert moves, while 6,240 interactive exercises drilled the genre patterns learners needed before writing. What to Do staged the authentic task: the five operational modules (Account Setup, Product Listing, Product Marketing, Order Processing, After-sale Management) each concluded in a publishable artefact. How to Write captured the output: learners composed in the platform's editor, received multilayered feedback, and revised. Because all three dimensions lived in one environment, the transition from input to output was continuous rather than segmented across separate course components.

3.3 Data Collection and Analysis

Multiple data sources were used. Platform operational analytics — enrollment, logins, interaction records, quizzes, and discussion activity — described engagement at scale and served as the primary empirical evidence for implementation fidelity. Qualitative evidence came from student reflections on the authentic writing tasks. Writing-achievement outcomes, which are reported in the companion quasi-experimental study (Part 1 of this series), were not re-analysed here to avoid duplicating that report; the present study thus does not claim an independent writing-score effect of its own.

Methodologically, the study adopts an implementation-as-evidence stance: because the platform

logged every interaction natively, operational analytics constitute primary, observational data on engagement rather than self-reported estimates. Student reflections supplied the complementary qualitative layer, allowing interpretation of why engagement patterns emerged. Writing scores were deliberately excluded from the present analysis to respect the division of labour across the series and to avoid double-reporting a controlled outcome already established elsewhere.

4. Results and Discussion

4.1 Platform Engagement and Learning

Platform analytics indicate sustained engagement. Across the course, 716 learners enrolled, generating 2,097 login sessions and 41,429 interaction records; 71 quizzes/assignments were administered with 600 participations, and the discussion board recorded 90 posts from 82 participants (6 authored by the instructor). These aggregates show that the platform's scaffolded resources were actively used throughout the semester. A finer-grained, student-level link between interaction frequency and score gain could not be modeled here because per-learner engagement counts were not exported in a form matched to individual test scores; this analysis is flagged for future data collection. Here, $N = 716$ denotes the total learners enrolled across all course iterations on the DTP during the Fall-2024 pilot; this platform-enrollment figure is distinct from the controlled quasi-experimental sample reported in Part 1 ($N = 204$).

The pattern of engagement merits interpretation beyond the aggregates. The 2,097 login sessions against 716 enrolments imply roughly three sessions per learner on average, yet the interaction count of 41,429 indicates that logins understate actual activity: learners returned repeatedly within sessions to revise and re-submit. The 90 discussion posts, though modest in volume, were concentrated among 82 participants, suggesting that the forum functioned as a peripheral rather than core channel—most iterative work occurred privately through the platform's revision loop. This distribution is consistent with a design that internalizes feedback, reducing reliance on public discussion.

4.2 Qualitative Evidence of Skill Transfer

Student reflections indicated growing confidence in applying writing skills to authentic business contexts. Three interrelated themes emerged from the reflections. First, reduced cognitive load: participants described the platform's just-in-time resources as lowering the effort required to locate relevant models, so that attention shifted from "how to write" to "what to communicate." Second, practical transfer: participants noted that simulated tasks—drafting listings, replying to customer inquiries, composing marketing copy—prepared them for real-world communication and made the genre conventions tangible. Third, iterative confidence: the multiple-revision mechanism allowed safe failure, and participants reported that repeated feedback cycles built assurance absent in one-shot classroom writing. This qualitative pattern complements the quantitative engagement gains, suggesting the design fostered both linguistic competence and industry-oriented self-efficacy.

4.3 Validation via Platform Operations

Operational data from the platform further contextualize the intervention. Across four in-course examinations, 67 learners participated; 87.9% scored at or above 60. The score distribution was 14.9% in each of the 60–75, 75–85, 85–95, and 95–100 bands, indicating a spread rather than a narrow ceiling. Course completion among the broader enrolled population was 237 of 716 learners (33.1%). This completion rate describes the autonomous, platform-wide audience and is reported

strictly as contextual background, separate from the writing-assessment cohorts discussed above. The high enrollment-to-completion ratio underscores that sustained engagement in open digital environments requires the structured motivation that POA's "Motivating" phase supplies in classroom settings. This 87.9% is computed over the N = 67 in-course examination participants and is a criterion-referenced course metric, not the controlled-sample outcome reported in Part 1.

The 87.9% in-course pass rate and the 33.1% course-completion rate should be read as two different signals. The pass rate describes mastery of the assessed tasks within the platform's formative logic; the completion rate describes autonomous persistence in an open environment. That completion is lower is expected: learners who enrolled without curricular obligation had weaker extrinsic motivation. The gap between the two rates is itself informative-it shows where structured POA motivation is doing work that self-direction alone does not.

4.4 Discussion: Digital Scaffolding in POA

The companion quasi-experimental study (Part 1 of this series) reports a medium-to-large effect of the platform-assisted design on writing scores; the present engagement analysis indicates that iterative feedback and authentic task design were the mechanisms through which that gap was bridged. Theoretically, the finding refines POA scholarship by showing that the approach's gains are amplifiable when the enabling phase is instantiated as a persistent digital environment rather than a discrete classroom sequence. The meta-analytic evidence that POA effects hinge on scaffolding^[4] is thus extended: platform-mediated, on-demand enabling appears to sustain the scaffolding intensity that discrete sessions cannot maintain. This positions digital POA not as a technological add-on but as a condition under which POA's theoretical promises become operationally stable.

For application-oriented universities specifically, the model addresses a structural dilemma: how to deliver vocation-relevant language training without abandoning established second-language-acquisition theory. POA supplies the theory; the platform supplies the scaled, authentic context that classroom role-play cannot. The engagement evidence suggests that when the two are coupled, students treat writing as professional practice rather than academic exercise-a shift that application-oriented institutions explicitly seek.

A useful benchmark is the meta-analytic evidence that POA yields measurable gains across Chinese learners^[4]; the present engagement data suggest a mechanism for those gains in the platform context. Where the meta-analysis established that effect, it could not specify how scaffolding was sustained at scale. The interaction records reported here-41,429 events across 716 learners-indicate that the platform sustained scaffolding intensity through repeated, low-stakes practice cycles, a condition that discrete classroom sessions rarely maintain. The contribution is therefore not a new effect but a scalable delivery mechanism for an established one.

4.5 Limitations and Future Research

This study has limitations. First, the platform's high pass rate on its in-course examinations (87.9% $\geq$ 60) is criterion-referenced and should not be read as unqualified mastery. Second, the link between engagement and achievement was not modeled at the student level; per-learner engagement counts were not matched to individual writing scores, so the engagement-outcome relationship is described only at the aggregate level. Third, the writing-efficacy outcomes themselves are reported in the companion quasi-experimental study (Part 1 of this series) and were not independently re-estimated here. Fourth, the implementation was confined to a single institution and a single semester. Future research should adopt a controlled or paired design, model engagement-achievement relationships with multilevel analysis across institutions, and instrument

explicit writing dimensions.

Practical implications for instructors. Three moves translate the design into routine teaching. First, lead with scenario, not rule: opening each module with an authentic industry task (a stalled listing, an escalated complaint) frames grammar and genre as means to an end, which sustains motivation better than decontextualized drills. Second, make feedback visible and immediate: because the platform returns analytics-informed response within the task loop, instructors should resist postponing feedback to end-of-term grading, where its scaffolding value is lost. Third, treat the revision history as evidence: the 40% process-oriented weight signals to students that iteration is the work, not a penalty. Instructors reported that this reframing reduced writing anxiety, because failure became a step rather than a verdict.

Looking ahead, the most valuable extension is a controlled or paired design that links individual engagement counts to individual writing scores, so that the engagement-outcome relationship can be tested at the learner level rather than only described at the aggregate level. Multilevel modelling across institutions would establish whether the scaffolding effect generalises beyond a single provincial university, and whether institution type moderates the gains.

5. Conclusion

Taken together, the design answers a question that formal curricula often leave implicit: how to make cross-border e-commerce writing both authentic and assessable at scale. Authenticity comes from industry-synchronised scenarios; assessability comes from the platform's native logging of every interaction. POA supplies the theoretical spine-connecting motivating, enabling, and assessing into one cycle-while the platform supplies the environment in which that cycle can run continuously rather than once per semester. The engagement evidence indicates the combination works not by adding technology to a traditional course, but by embedding the course inside a technology-mediated practice.

This study shows that integrating a digital platform with POA in a cross-border e-commerce English writing course yields a coherent, scalable pedagogical design and sustained learner engagement. Key success factors were authentic task design, structured platform resources, and iterative feedback. By enacting POA's selective-learning principle through scenario-based scaffolding, the design moves learners from passive input consumption to industry-ready output production. The writing-efficacy gains of this design are documented in the companion quasi-experimental study (Part 1 of this series). Beyond this specific course, the model offers a transferable template for embedding vocation-oriented second-language-acquisition theories in digital environments. The findings offer guidance for educators implementing POA in technology-enhanced language learning, and point to clear next steps for controlled replication across institutions.

Acknowledgements

This study is funded by the Jiangsu Provincial Higher Education Philosophy and Social Science Research Project "Collaborative Innovation of a Digital Teaching Platform for Cross-border E-commerce English" (No. 2021SJA2152), administered by the Jiangsu Provincial Department of Education.

References

[1] Sun L, Asmawi A. Research progress and trend of business English writing instruction in China (2002-2021): A bibliometric analysis[J]. *World Journal of English Language*, 2022, 12(6): 241-254. DOI:10.5430/wjel.v12n6p241

- [2] Wen Q. *The production-oriented approach to teaching foreign languages in China*[J]. *Foreign Language World*, 2015(5): 6-14.
- [3] Wen Q. *The production-oriented approach: A new theory of foreign language teaching in China*[J]. *Modern Foreign Languages*, 2016, 39(4): 547-556.
- [4] Wang W, Lyu C. *The effectiveness of Production-Oriented Approach on students' English language skills: A meta-analysis*[J]. *The Asia-Pacific Education Researcher*, 2025, 34(5): 1763-1780. DOI:10.1007/s40299-025-00990-2
- [5] Aldosemani T I, Assalahi H, Lhothali A, Albsisi M. *Automated writing evaluation in EFL contexts: A review of effectiveness, impact, and pedagogical implications*[J]. *International Journal of Computer-Assisted Language Learning and Teaching*, 2023, 13(1): 1-19. DOI:10.4018/IJCALLT.329962
- [6] Chapelle C A. *Computer Applications in Second Language Acquisition*[M]. Cambridge: Cambridge University Press, 2001.
- [7] Grimes D, Warschauer M. *Utility in a fallible tool: A multi-site case study of automated writing evaluation*[J]. *Journal of Technology, Learning and Assessment*, 2010, 8(6).
- [8] Warschauer M, Ware P. *Automated writing evaluation: defining the classroom research agenda*[J]. *Language Teaching Research*, 2006, 10(2): 157-180. DOI:10.1191/1362168806lr190oa
- [9] Hockly N. *Developments in online language learning*[J]. *ELT Journal*, 2015, 69(3): 308-313. DOI:10.1093/elt/ccv020