



Research on the Talent Cultivation Model of an English Cross-border E-commerce Micro-major under the Background of the Inner Mongolia Pilot Free Trade Zone

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Abstract: The Inner Mongolia Pilot Free Trade Zone has created strong demand for graduates who combine English proficiency, practical cross-border e-commerce skills and local trade knowledge. Private universities in the region struggle to bridge the competency gap between traditional foreign language teaching and real workplace needs. This paper reports a mixed-methods case study of an English cross-border e-commerce micro-major at Inner Mongolia Honder College of Arts and Sciences. Drawing on pre-post competency surveys, semi-structured interviews and analysis of course documents and student project work, it examines how this “English plus cross-border e-commerce” programme was designed, what outcomes it produced and what barriers it faced. Results show the modular curriculum improved students’ business communication and operational skills, yet progress was limited by weak university–industry links, insufficient teacher industry experience and a lack of authentic commercial projects. Building on triple helix theory, this paper proposes practical adjustments to curriculum design, mentor-led teaching, project-based learning and multi-dimensional assessment. The findings offer actionable lessons for foreign language micro-major development at regional private universities serving border trade and free trade zone industries.

Keywords: Inner Mongolia Pilot Free Trade Zone; cross-border e-commerce; micro-major; talent cultivation

Introduction

The Inner Mongolia Pilot Free Trade Zone supports China’s national northward opening strategy. Located close to Mongolia and Russia, with China–Europe Railway Express routes and port logistics hubs nearby, Inner Mongolia actively exports local agricultural goods, livestock products, ethnic handicrafts and cultural merchandise. Cross-border e-commerce has become a major channel for regional foreign trade, and local employers now expect different capabilities from university graduates ^[1]. Small and medium-sized trading firms, the main players in this market, frequently report difficulty hiring staff who can communicate in English while handling day-to-day e-commerce operations ^[2].

Traditional English degrees at regional universities focus heavily on literature, general translation and intercultural communication. They rarely teach e-commerce platform management, cross-border compliance, social media marketing for overseas audiences or localized product writing ^[3]. This mismatch means many language graduates are not ready for roles in free-trade-zone cross-border businesses ^[4].

A micro-major offers a flexible minor-style pathway built into an existing undergraduate programme. Short, modular courses help students build targeted vocational skills without overhauling their full degree ^[5]. For private universities with limited budgets and disciplinary resources, micro-majors provide a realistic way to move beyond pure language training toward integrated “language + professional skill” education. At Inner Mongolia Honder College of Arts and Sciences, a private university in Hohhot, faculty have launched an English cross-border e-commerce micro-major for English majors. The programme prepares learners for applied roles at free trade zone e-commerce companies and small local trading enterprises.

A large body of existing work on cross-border e-commerce training focuses on public coastal universities or vocational colleges. Few empirical studies explore micro-major practice at private universities in border regions, especially research that connects curriculum design to free trade zone labour market needs ^[6]. This paper addresses three research questions:

1. To what extent does this English cross-border e-commerce micro-major improve students’ practical cross-border trade skills?
2. What strengths and practical challenges emerge when running this micro-major at a private university?
3. How can the programme be adjusted to better meet free trade zone industry needs through university – industry collaboration?

This study adds empirical evidence for foreign language curriculum reform at private border-region universities and offers locally tailored training ideas for Inner Mongolia’s cross-border e-commerce sector.

Literature Review

Inner Mongolia’s cross-border e-commerce industry is dominated by SMEs selling agricultural and livestock products. Chen notes cross-border e-commerce helps Inner Mongolian SMEs expand internationally, yet these firms struggle to recruit staff who combine English communication with hands-on platform skills ^[1]. Xu, Liu and Zhang find cross-border



e-commerce pilot zones drive regional economic growth, but shortages of multi-skilled workers restrict these benefits [2]. Industrial clusters around ports such as Manzhouli operate “smart logistics + cross-border e-commerce” systems. They need employees familiar with China–Europe Railway Express procedures, bilingual customer service and cross-border customs clearance [7].

Researchers have also documented a clear skills mismatch. Many language graduates have strong linguistic ability but lack training in digital marketing, basic data analysis and cross-border risk management. E-commerce graduates, by contrast, often struggle with cross-cultural communication and overseas copywriting [8]. Earlier local research finds traditional international trade courses seldom include online trade models suited to Inner Mongolia’s border markets [9]. Work from Wuhai further shows local e-commerce platforms face staffing shortages when expanding business into neighbouring countries [10].

Micro-majors represent a flexible, short-cycle educational innovation. Chen defines cross-border e-commerce micro-majors as modular curricula developed through university–industry partnerships, focused on practical vocational skills rather than broad disciplinary knowledge [5]. Lin, Jin and Hu’s work on undergraduate micro-majors argues compact modular courses let universities respond quickly to labour market shifts, matching the goals of applied university transformation [11]. Chen also proposes a “foreign language + micro-major” framework to promote exports of local signature products, highlighting the need to combine language services, cross-cultural negotiation and e-commerce practice [3].

Triple helix theory describes an interactive innovation system connecting universities, industry and government [12]. In cross-border e-commerce education, universities deliver classroom instruction, businesses provide real projects and industry mentors, and free trade zone authorities offer policy support and training infrastructure. Lou argues the digital economy requires updated training models built around industry–education cooperation [13]. Han and Wen draw on experience from industry colleges offering digital trade programmes, showing project-based learning and workplace internships reduce the gap between classroom learning and real work [14].

Most published research focuses on coastal universities or vocational schools. There is far less work examining foreign language micro-majors at private universities within the Inner Mongolia Pilot Free Trade Zone, and few empirical evaluations of micro-major implementation for border trade. Related work from Xinjiang examines free trade zone e-commerce training, yet the two regions serve different export markets; Xinjiang’s model cannot simply be copied for Inner Mongolia’s agricultural export focus [6]. Trade facilitation policies also shape export opportunities for local firms and add complexity to curriculum planning [15]. Russian and Mongolian consumer preferences further demand targeted language and marketing training for local exporters [16].

Methodology

This study uses triangulation within an instrumental mixed-methods case study design. Three independent sources of evidence were combined to cross-check findings and reduce bias from self-reported data: pre-post surveys, semi-structured interviews, and analysis of documents plus student work. The case examined is the English cross-border e-commerce micro-major at Inner Mongolia Honder College of Arts and Sciences.

Research participants

Participants were 62 English majors enrolled on the micro-major. All completed both pre-test and post-test surveys. The interview sample included 12 stakeholders: four student representatives, four full-time foreign language teachers from the college, two part-time industry mentors from e-commerce firms in Hohhot and Manzhouli, and two senior managers at local cross-border SMEs.

Research instruments

1. Pre-post competency survey A five-point Likert survey (1 = strongly disagree, 5 = strongly agree) measured students’ self-rated skills across five domains: English business writing, cross-cultural communication, cross-border platform operation, overseas social media marketing, and cross-border risk control. The same survey was distributed at the start (pre-test) and end (post-test) of one academic year of micro-major teaching. Cronbach’s α for the full scale reached 0.82, showing good internal reliability. Paired-sample t-tests compared pre-test and post-test scores.

2. Semi-structured interview protocol Separate interview guides were created for students, teachers, industry mentors and enterprise managers. Discussions covered curriculum fit, practical training barriers, expected graduate skills and recommendations for university–industry collaboration. All interviews were audio-recorded, transcribed in full and coded using thematic analysis.

3. Document and student artifact analysis Materials analysed included the micro-major training plan, course syllabi, project briefs and assessment rules. Student work samples consisted of authentic coursework: cross-border product listings, marketing texts written for Mongolian and Russian audiences, simulated e-commerce store plans and final project reports. Two raters — the researcher and one industry mentor — scored these samples using a standard competency rubric. Cohen’s Kappa was calculated to measure inter-rater reliability.

Data collection procedure

Pre-test surveys were distributed in September 2025 before micro-major classes began. Post-test surveys were collected in June 2026 after a full academic year of training. Interviews took place in person and remotely between April and June 2026. Course documents and student project work were retrieved from department archives.

Data analysis

Quantitative survey data were analysed in SPSS 26.0. Paired-sample t-tests identified statistically significant skill changes between pre-test and post-test. Qualitative interview transcripts, course documents and student work were coded thematically. Findings from all three data sources were cross-referenced for triangulation.

Results and Discussion

Pre-test and post-test competency comparison

Table 1 shows descriptive statistics and paired t-test results for students' self-rated skills before and after the micro-major. Learners made statistically significant gains across all five competency areas. Language-related skills started from a higher baseline and improved moderately, while operational and compliance skills saw larger absolute gains, even though their final average scores remained lower.

Competency Indicator	Pre-test Mean (SD)	Post-test Mean (SD)	t	p
English business correspondence	3.42 (0.71)	4.01 (0.62)	-7.82	<0.001
Cross-cultural communication	3.35 (0.75)	3.94 (0.68)	-7.26	<0.001
Cross-border platform operation	2.48 (0.80)	3.12 (0.77)	-8.04	<0.001
Overseas social media marketing	2.41 (0.83)	3.05 (0.81)	-7.71	<0.001
Cross-border trade compliance & risk control	2.32 (0.86)	2.97 (0.84)	-7.43	<0.001

Table 1: Pre-test and Post-test Competency Self-assessment of Students (N=62)

Note: 5-point Likert scale (1=strongly disagree; 5=strongly agree). SD = Standard Deviation. p <0.001 indicates a statistically significant difference.

Scores from student project samples aligned with survey results. Students' written work such as English product listings improved substantially, yet most still struggled with risk assessment and operational planning. Only 38.7% of respondents reported access to real commercial projects during training. This points to a clear gap between simulated classroom practice and live business environments.

Thematic findings from interviews

Category	Contents
Strengths	1. Draws on existing English faculty and language teaching foundation; 2. Modular courses offer flexibility suited to micro-major delivery; 3. Industry mentors bring real local Russia–Mongolia border trade cases; 4. Boosts students' business English and cross-cultural communication.
Weaknesses	1. Full-time teaching staff lack frontline cross-border e-commerce experience; 2. Limited authentic commercial projects; university–industry links remain superficial; 3. Insufficient practical training hardware; 4. Students show weak skills in platform operation and cross-border compliance.
Opportunities	1. Inner Mongolia Pilot Free Trade Zone policy support for border cross-border trade; 2. Growing export demand for local agricultural and livestock products; 3. Development of China–Europe Railway Express and port industrial clusters; 4. Local SMEs increasingly seek staff combining language and operational skills.
Threats	1. Frequent updates to cross-border platform rules and trade regulations; 2. Regional brain drain; experienced practitioners tend to move to coastal cities; 3. Competition from training programmes at other border-region universities; 4. Limited institutional budget for lab development and industry partnerships.

Table 2: SWOT Summary of the English Cross-border E-commerce Micro-major Cultivation Model

Three key themes emerged from coding interview transcripts:

1. Strengths of the micro-major model: The “English plus e-commerce” modular curriculum builds on the college's existing language teaching resources. Students can apply their English to write product listings, handle customer service and create social media content, avoiding the overly theoretical teaching common in traditional language majors. Industry mentors shared real cases from Mongolian and Russian cross-border sales, matching the market focus of the Inner Mongolia Pilot Free Trade Zone.

2. Key bottlenecks: First, most full-time English teachers lack hands-on cross-border e-commerce experience. They teach language well but know less about data analytics, platform algorithms, cross-border tax and customs compliance. Second, current university-industry cooperation remains superficial: activities are limited to guest talks and short site visits. Long-term project collaboration and stable internships are rare. Third, practical training equipment is limited. Simulation platforms cannot fully replicate market volatility or constantly changing platform rules.

3. Industry expectations: Enterprise managers explained local cross-border firms need employees who can manage small-batch exports of agricultural and livestock goods, resolve multilingual customer disputes and create localized marketing

for Mongolian and Russian buyers. At present, students still find independent product sourcing, risk assessment and data-driven marketing planning difficult.

Discussion

The results show this English cross-border e-commerce micro-major can deliver practical multi-skilled training suitable for private university settings. The findings support Chen's argument: embedding e-commerce modules into English programmes turns purely linguistic knowledge into commercially useful language service capacity, matching border trade labour needs in the Inner Mongolia Free Trade Zone [3]. Statistically significant gains across all measured skills confirm the modular curriculum produces measurable learning improvements. Still, operational and compliance skills remain the weakest area, consistent with the student work evaluation.

Even so, the programme faces familiar constraints documented in existing micro-major research [5], [11]. The biggest challenge is the disconnect between classroom learning and real industry practice. From a triple helix perspective, university-industry collaboration here is still at an early stage. Free trade zone public resources such as training bases and policy workshops have not yet been systematically integrated into teaching [12].

Compared with the free trade zone e-commerce training model in Xinjiang [6], Inner Mongolia has distinct market characteristics. Its cross-border e-commerce focuses heavily on agricultural and livestock exports to neighbouring Mongolia and Russia, rather than mass consumer goods for Europe and North America. Curriculum designers cannot simply adopt course frameworks built for coastal universities. Localised modules covering Mongolian and Russian consumer behaviour, China-Europe Railway Express logistics and agricultural product cross-border quarantine deserve more attention.

Private universities with tight funding and staffing do not need to build entirely new teaching teams for micro-majors. A mixed team of full-time language teachers, industry mentors and part-time trade specialists is more practical. Full-time teachers should complete short placements in enterprises and free trade zone workshops to build industry awareness.

Assessment also needs reform. Traditional written exams cannot capture the full range of cross-border e-commerce skills. A skill-focused assessment system using project portfolios, simulation performance, competition outputs and employer feedback should replace single final written examinations. Trade facilitation rules keep changing export requirements, so course materials need regular revision [15]. Research on Inner Mongolia agricultural cross-border e-commerce also highlights that local product features impose unique demands on product descriptions and overseas promotion [8]. Marketing for Russian social commerce platforms requires careful localisation and must be embedded within language teaching [16].

Conclusion

Within the policy framework of the Inner Mongolia Pilot Free Trade Zone, the English cross-border e-commerce micro-major created by private undergraduate colleges offers a feasible route to train applied graduates with both English and cross-border e-commerce skills. This instrumental case study uses triangulated mixed methods. Pre-post surveys, stakeholder interviews and student project work all confirm modular micro-major courses strengthen students' business English, cross-cultural communication and basic e-commerce operational skills [17]. That said, progress is held back by limited teacher industry experience, weak university-industry partnerships and few live business projects for training.

Four practical recommendations emerge to refine the programme. First, revise the curriculum to add local modules on Mongolia-Russia border trade and free trade zone cross-border compliance. Second, develop dual-capable teachers through enterprise placements and regular co-teaching with industry mentors. Third, deepen university-industry collaboration to bring real commercial projects into teaching and create stable internship pathways at free trade zone and port businesses. Fourth, adopt multi-dimensional assessment combining portfolio evaluation, employer feedback and professional skill certification.

Future research could include more universities across the region and track graduate employment over longer periods. Follow-up work may explore long-term skill development among students on "English + cross-border e-commerce" micro-majors, as well as how free trade zone policy shapes foreign language teaching at border undergraduate and vocational institutions.

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