https://doi.org/10.62836/emi.v5i4.0027

Global Science Publishing

EMI

Economics & Management Information

https://ojs.sgsci.org/journals/emi

Article

Mechanisms of Generative AI Empowerment in University Students' Cross-Border E-Commerce Entrepreneurship

Hui Cheng *, Mingming Zhang and Wenxian Liang

School of Economics and Management, Zhaoqing University, Zhaoqing 526061, China

Abstract: Generative artificial intelligence (AI) is lowering the entry barriers for university students entering cross-border e-commerce, yet easy-to-use tools do not translate automatically into entrepreneurial success. Drawing on the relevant literature and university practice, this paper identifies three common problems along the dimensions of application, competition and support. First, students mostly use generative AI to produce copy and images, and their entrepreneurial capabilities have not improved in step. Second, the same tools and templates lead to convergence in product selection and content, pushing new stores into price-based competition. Third, curricula, teaching staff, incubation services and evaluation mechanisms lag behind, leaving compliance and operational risks largely to students. Three recommendations follow: shift training from tool operation to running a business; encourage differentiated operation by drawing on industrial clusters and niche markets; and strengthen support mechanisms, including coordinated mentoring, real projects, compliance review and process-based evaluation. The paper argues that generative AI can substitute for execution but not for judgement and responsibility; the reform of entrepreneurship education should therefore move from providing tools to cultivating students who can use tools to run a business.

Keywords: generative AI; cross-border e-commerce; university student entrepreneurship; entrepreneurship education; homogeneous competition

1. Introduction

According to the General Administration of Customs, China's cross-border e-commerce imports and exports reached RMB 2.84 trillion in 2025, up 4.8% year on year and accounting for 6.2% of the country's total trade in goods over the same period [1]. Goods sourced from Guangdong accounted for 51.1% of China's cross-border e-commerce exports, exceeding half for the first time; in the same year, Guangdong's own cross-border e-commerce imports and exports amounted to RMB 623 billion, more than one third of the national total [2]. These two figures measure different things—the supply capacity of industrial clusters and the scale of local foreign trade—and should not be conflated. Alongside industrial agglomeration, employment pressure provides a second backdrop: the 2026 graduating cohort is expected to reach 12.7 million, an increase of 480,000 over the previous year [3], while Ren She Bu Fa (2026) No. 19 explicitly encourages self-employment and flexible employment and supports graduates seeking work or starting businesses in the digital, creative and platform economies [4]. Industrial policy and employment policy thus converge on cross-border e-commerce.

Received: 2 November 2026; Accepted: 17 November 2026.

* Corresponding: Hui Cheng (chenghui@zqu.edu.cn)

Generative AI, represented by large language models and multimodal generation, now covers product research, multilingual copywriting, images and short videos, automated advertising, virtual-host livestreaming, real-time customer service, performance review and compliance checks. Copywriting, design and advertising that once required a division of labour within a team can now be produced quickly with tools. Constraints on capital, foreign-language skills, experience and content production have all loosened, and running a cross-border store alone has moved from an exceptional case to a reproducible starting point. For students with little capital or track record, tools do close part of the capability gap.

But easy-to-use tools do not make an easy business. Practice in Guangdong's universities shows that students use generative AI mainly for copy and image generation, while product selection, supply-chain coordination, cross-cultural communication and compliance still depend largely on themselves. Curricula and practical training are updated slowly, and cooperation between universities, firms and industrial clusters remains shallow. More importantly, universal access to the same tools does not give every venture a distinctive edge. When most entrepreneurs call the same models and follow similar templates, products and content converge, and competition returns to the areas where tools cannot help.

2. Literature Review and Theoretical Foundations

2.1. Generative AI in Firms

Chinese-language studies have appeared in growing numbers since 2025 and broadly follow two lines of inquiry. The first examines specific operational stages, discussing the role of generative AI in product selection, multilingual content, targeted marketing, customer relations and compliance control. Wei and Sun argue that generative AI works mainly by lowering transaction costs, improving consumer experience and strengthening adaptability, while also bringing risks such as intellectual property infringement, leakage of trade secrets and misleading promotion [5]. The second line moves to the value chain and trade level. Using registration data on generative AI services, Li et al. show at both regional and firm levels that generative AI improves cross-border matching between supply and demand, broadens the range of export products and raises product quality; these effects are stronger in e-commerce and product-design settings, for non-standardised products, and in regions with a stronger e-commerce base [6]. A more recent discussion asks how large a 'one-person company' can become, suggesting that its scale depends on the balance between efficiency gains from technology and the management costs that arise as business grows more complex [7]. International research places more emphasis on experimental designs and methodological extensions, offering a useful comparison for assessing the actual effect of each stage.

2.2. Curriculum Reform in Higher Education

Research on the education side is concentrated in vocational colleges and covers the integration of 'AI + e-commerce teaching', curriculum adjustment under industry-education integration, intercultural business communication, human-machine collaboration in customer-service training, and the changes brought by lower costs of building self-hosted stores. Studies of applied-oriented undergraduate institutions are relatively scarce and mostly follow conventional themes—updating course content, training teachers, building practice platforms and reforming assessment—with few in-depth cases of university-industry collaboration. A common limitation is that AI is treated as an additional knowledge point: a tool module is added to the curriculum, but the way students are trained does not change accordingly. Product-selection judgement, risk control and the assumption of responsibility remain outside the existing teaching framework.

2.3. University Students' Cross-Border E-Commerce Entrepreneurship

Chinese-language literature on university students' cross-border e-commerce entrepreneurship is already substantial, yet work that brings generative AI and this group into the same analytical framework is still at an early stage and consists mostly of lists of difficulties and recommendations. International studies have noted that generative AI improves the fit between entrepreneurial tasks and contributes to product customisation and

market performance, but they do not address enrolled students [8]. This difference in subject creates a blind spot: firms possess accumulated resources, a division of labour and a budget for trial and error, whereas students rely on externally supplied courses, mentors, incubators and industrial clusters; the conditions and outcomes of tool use are therefore not the same [9].

2.4. Digital Entrepreneurship Theory

Digital entrepreneurship research holds that digital technologies are not merely tools; they also reshape where opportunities come from, how resources are combined and how large a venture needs to be [10]. Other work cautions that technology offers possibilities rather than outcomes, and whether a possibility becomes a real result depends on the user's goals, capabilities and external conditions [11, 12]. For enrolled students, cross-border e-commerce entrepreneurship means using digital tools, with limited capital and experience and with the support of universities and platforms, to identify opportunities and run an asset-light business. When resources are scarce, existing means can be combined flexibly [13]; when the environment shifts, continuous adjustment is required; and identifying a suitable opportunity remains the starting point [14].

Applied to generative AI, these ideas can be put simply. First, the tasks involved in running a store differ: product research, multilingual copy, images and video, advertising, customer service, compliance and review. Some follow clear rules and are easy to correct if they go wrong; others depend on experience and are costly to get wrong. Second, generative AI helps markedly with the former—generating, translating, batch processing and forecasting—but offers limited help, and can even cause trouble, with the latter. Third, once a tool produces an output, someone still has to break the work down, decide which steps can be delegated, check whether the output is right, and take responsibility when something goes wrong. Much of this know-how can only be acquired through practice and is difficult to capture fully in a textbook. In short, tools make tasks easier, but they do not by themselves create the ability to run a business.

3. Problems in Generative AI-Empowered Cross-Border E-Commerce Entrepreneurship among University Students

Practice in Guangdong's universities suggests that generative AI has become common in student ventures, but there is still a clear gap between how deeply it is used and what the ventures achieve [15]. A large-sample field study finds that AI helps inexperienced workers most [16], while an experiment cautions that on tasks beyond a tool's capabilities, using it makes errors more likely [17]. As tools drive down the cost of producing content, deciding when to use them and whether to revise their output becomes more important [18]. In other words, tools lower the barrier to starting but do not automatically supply what is needed to run a business. Taken together, the literature and university practice point to three main problems.

3.1. Shallow Tool Use and Lagging Entrepreneurial Capability

Students find copy, images and translation the easiest to start with. These tasks show quick, visible results and are therefore most often taken as evidence that 'we can use AI'. What actually determines whether a store survives is what to sell, where to source it, how to price it, and how to handle after-sales service and compliance. Such matters have no fixed rules, draw on scattered information and are costly to get wrong, so a tool's answer can only serve as a reference. Many projects spend considerable time generating materials while leaving the basis for product selection, cost calculations and supply reliability unverified.

This is related to how students are trained. Most courses and training programmes treat AI as an additional knowledge point, teaching prompt writing and tool operation, with assignments that end once a piece of copy or an image is produced. Students are seldom asked to state their data sources, compare alternative options or explain why they made a change. The tool completes the task, but the student never goes through the process of judging. Much of this know-how develops only through repeated trial and error and cannot be gained from lectures or templates [19]. The result is more students who can operate tools without a matching increase in those who can run a store independently.

3.2. Content Convergence and the Squeeze on New Stores

Most student entrepreneurs use the same models, similar templates and the same set of platform services, so their product-selection conclusions, titles, main images and advertising messages tend to converge. Tools make content production faster, but they also make everyone's output look alike. The difference lies not in writing style but in where opportunities come from: when market judgements also rely mainly on the high-probability answers a tool provides, many people end up targeting the same 'best-selling' products [20].

Convergence pushes competition back onto price. New stores have no brand, reviews or accumulated traffic and can only seek exposure through discounts and paid advertising, squeezing already thin margins. Platforms' detection and suppression of duplicate materials further reduce the distribution of mass-generated content. Institutions, consumption habits and cultural taboos differ greatly across markets [18], and generic templates cannot accommodate such differences, creating compliance and communication problems. Existing research also indicates that the efficiency gains from generative AI are less evident for non-standardised products that require local knowledge [6]. Lower entry barriers and a harder struggle to survive thus occur at the same time.

3.3. Inadequate Support and the Burden of Risk on Students

The external support on which student ventures depend remains weak. University teachers are strong in theory but lack hands-on experience of store operations and platform rules; industry mentors mostly contribute lectures and short-term guidance; university-industry collaboration often stops at signing agreements and unveiling plaques; and incubation platforms emphasise the number of stores opened rather than continued follow-up, with few people accompanying a project through review after launch. Curricula are updated more slowly than tools and platform rules, so students mostly resolve problems by searching online.

The allocation of risk deserves particular attention. AI-generated materials may involve intellectual property, misleading promotion and data compliance issues [5], while product certification, taxation, after-sales service and consumer complaints ultimately fall on students operating as individuals or micro-entities. Tool providers do not answer for students, and neither universities nor platforms take part in specific transactions; when a dispute arises, students lack both experience and traceable records. At the same time, assessment based on the number of stores, tool calls or short-term transaction value encourages opening more stores and generating more output, not checking facts or documenting the process. Weak support and misdirected evaluation combine to reproduce shallow use.

4. Building a Cultivation System for Student Cross-Border E-Commerce Entrepreneurs

These problems are interconnected. Teaching only tool operation leaves students at a shallow level; working from the same templates makes convergence inevitable; and without sustained support and sensible evaluation, the first two problems are hard to correct. Remedies should therefore go beyond adding tools or contact hours and address curricula, business practice and support at the same time.

4.1. From Operating Tools to Running a Business

Courses should be reorganised around the real process of opening a store: market research and product selection, sourcing and cost calculation, content and multilingual expression, advertising and customer service, compliance and review. Generative AI should not be a standalone chapter but be embedded in every stage as one means of completing a task. Assignment requirements should change as well: a product-selection conclusion must state its data sources and the date of research and explain at least one reason for rejecting an alternative; copy and visual materials must be submitted with the generated version and a note on human revisions. Assessment should focus on whether the evidence is sufficient and the revisions justified, not on the volume of output.

Training should be as close to real conditions as possible. Universities can work with local industrial clusters and cross-border e-commerce firms so that student teams take responsibility for a specific category and complete the full process from product selection to receiving real order feedback. Where real transactions are not feasible, firms' real data and cases should be used rather than simulated exercises. The teacher's role is to question and check,

helping students turn a mistake into reusable experience rather than supplying a standard answer.

4.2. Encouraging Differentiated Operation

Universities and incubators should deliberately guide students towards narrow but deep product categories and discourage broad assortments and bulk listing. Guangdong has a complete base of industrial clusters, so projects can be tied to local supply, smaller-language markets or specific customer groups and face concrete customers and constraints from the outset. Students should be encouraged to accumulate their own materials, language data and product-selection evidence through real communication, after-sales service and return records. Such first-hand material supports differentiation better than generic templates and can also be used to check the conclusions produced by tools.

Compliance and platform rules should be considered in advance. Certification requirements, cultural taboos and promotional claims in the target market should be verified before listing, and AI-generated descriptions should not be published unchanged. Students should understand how platforms handle duplicate content and avoid bulk posting of homogeneous materials. Iteration should be driven by repeat purchases, the causes of negative reviews and real order data, not by how many images or lines of copy were generated. Differentiation is not generated; it accumulates gradually in a specific market.

4.3. Strengthening Support and Evaluation

Support needs to work as a team. Academic teachers handle courses and process management, industry mentors advise on practical issues such as product selection, advertising and supply chains, and compliance mentors or external legal advisers review public commitments and materials before release; the three roles should not be collapsed into one. Incubation services should continue after a store goes live, requiring projects to keep process records of task allocation, generated versions, revisions and public commitments, so that problems can be traced, questions can be answered and reviews can be conducted afterwards.

Evaluation should also change direction. Measuring the number of stores, tool calls or short-term sales encourages more stores and more output; focusing instead on venture survival, compliance incidents, the quality of reviews and records of independent decisions directs incentives towards genuine capability. The entrepreneurship training subsidies, guaranteed start-up loans and social insurance subsidies for flexible employment listed in Ren She Bu Fa [2026] No. 19 provide a policy interface for such indicator reform. It should be noted that indicators are only a means: if cultivation becomes a checklist, students will learn to avoid scrutiny rather than make decisions under uncertainty [4]. Review sessions should therefore remain open to discussion and allow students to question the rules themselves.

The three recommendations correspond to the three problems and point to the same thread: tools can carry out execution for students, but not judgement, accumulation or responsibility (see Table 1). Only when curricula teach the process of judging, business practice accumulates differentiation, and mechanisms preserve responsibility and experience can the convenience of generative AI be converted into stronger entrepreneurial capability.

Table 1. Main problems and corresponding recommendations.

Problem	Common Symptoms	Recommended Response	Suggested Indicators
Shallow tool use	Only copy and images are generated; product selection, costs and compliance are left unverified	Reorganise courses around the business process; require data sources and revision notes in assignments	Project completion rate; quality of revision notes
Homogeneous competition	Product choices and content converge; exposure is bought through discounts and paid traffic	Focus on niche markets and industrial clusters; accumulate proprietary materials and order feedback	Repeat-purchase rate; share of differentiated products; share of organic traffic
Weak support and safeguards	Teachers lack practical experience; incubators offer little follow-up; students bear the risks alone	Coordinate three types of mentors; keep process records and conduct compliance review	Store survival period; number of compliance incidents; review completion rate

5. Conclusions and Discussion

Generative AI has clearly lowered the barrier for university students to open a cross-border store, but what it changes is mainly how work is done, not the ability to run a business. The analysis in this paper shows that tools can take over execution such as copy, images and translation, but cannot replace product-selection judgement, market understanding, risk control or the assumption of responsibility; the more widely they are used, the more these abilities matter. For universities, reform should not stop at adding tools and operational class hours. It should give students the experience of running a real business and preserve the record of how they judged and revised.

This paper makes three contributions. It shifts the object of study from established firms to enrolled students, adding this group to discussions of digital entrepreneurship; it shows that the relationship between tool investment and venture performance is not straightforward, since effects depend on the nature of the task and the user's judgement; and it moves entrepreneurship education from general statements about competencies to concrete arrangements for curricula, mentoring, incubation and evaluation. Several limitations should be noted. This is a theoretical analysis without questionnaires or interviews, so the arguments await empirical testing; model capabilities change rapidly, and conclusions drawn from Guangdong's industrial clusters and its universities should not be extended directly to other regions. Future research could use cross-regional samples to track the survival of student ventures as tools become widespread.

Funding

This work was supported by the 2026 Guangdong Provincial Education Science Planning Project (Higher Education Special) (Grant No. 2026GXJK0422) and the 2026 Annual Teaching Quality and Teaching Reform Project of Zhaoqing University (Grant No. ZLGC2026054).

Author Contributions

H.C., M.Z. and W.L.: writing—original draft, writing—review and editing. All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Not applicable.

Conflicts of Interest

The authors declare no conflict of interest.

References

1 General Administration of Customs of the People's Republic of China. China's Cross-Border E-Commerce Imports and Exports in 2025. Available online: http://www. customs. gov. cn/customs/2026-06/16/article_2026061616113889190.html (accessed on 16 November 2026). (In Chinese)

2 China News Service. Guangdong's Cross-Border E-Commerce Imports and Exports Reached RMB 623 Billion in 2025. Available online: https://chinanews. com/cj/2026/06-17/10642292. shtml (accessed on 16 November 2026). (In Chinese)

3 Ministry of Education of the People's Republic of China. Expanding Job Supply and Improving Services: Multiple Measures to Advance Graduate Employment. Available online: https://www.moe.gov.cn/jyb_xwfb/s5147/202606/t20260615_1440719.html (accessed on 16 November 2026). (In Chinese)

4 Ministry of Human Resources and Social Security of the People's Republic of China; Ministry of Finance of the People's Republic of China. Notice on Employment Work for 2026 University Graduates and Other Young People. Available online: https://www. gov. cn/zhengce/zhengceku/202603/content_7063305. htm (accessed on 16 November 2026). (In Chinese)

5 Wei L, Sun M. Mechanisms and Risks of Generative AI in Driving Cross-Border E-Commerce. *Business Exhibition Economy* 2025; **15**: 24–27. (In Chinese)

6 Li Q, Zhu, X, Liu, B. Generative AI and Digital Product Exports: Evidence from the Registration of Generative AI Services. *Journal of Quantitative & Technological Economics* 2026; **43**(**7**): 133–158. (In Chinese)

7 Philosophy and Social Sciences Preprint Platform, Renmin University of China. Mechanisms and Scale Boundaries of Organisational Efficiency Gains in Generative AI-Empowered 'One-Person Companies' in Cross-Border E-Commerce. Available online: https://zsyyb. cn/abs/202610.03683 (accessed on 16 November 2026). (In Chinese)

8 Nambisan S. Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship. *Entrepreneurship Theory and Practice* 2017; **41**(**6**): 1029–1055.

9 von Briel F, Davidsson P, Recker J. Digital Technologies as External Enablers of New Venture Creation in the IT Hardware Sector. *Entrepreneurship Theory and Practice* 2018; **42**(**1**): 47–70.

10 Nambisan S, Wright M, Feldman M. The Digital Transformation of Innovation and Entrepreneurship: Progress, Challenges and Key Themes. *Research Policy* 2019; **48**(**8**): 103773.

11 Leonardi PM. When Flexible Routines Meet Flexible Technologies: Affordance, Constraint, and the Imbrication of Human and Material Agencies. *MIS Quarterly* 2011; **35**(**1**): 147–167.

12 Strong DM, Johnson SA, Tulu B, *et al*. A Theory of Organization-EHR Affordance Actualization. *MIS Quarterly* 2014; **38**(**1**): 137–167.

13 Baker T, Nelson RE. Creating Something from Nothing: Resource Construction through Entrepreneurial Bricolage. *Administrative Science Quarterly* 2005; **50**(**3**): 329–366.

14 Shane S, Venkataraman S. The Promise of Entrepreneurship as a Field of Research. *Academy of Management Review* 2000, **25**(**1**): 217–226.

15 Teece DJ, Pisano G, Shuen A. Dynamic Capabilities and Strategic Management. *Strategic Management Journal* 1997; **18**(**7**): 509–533.

16 Brynjolfsson E, Li D, Raymond L. Generative AI at Work. *The Quarterly Journal of Economics* 2025; **140** (**2**): 889–942.

17 Dell'Acqua F, McFowland E, III, Mollick E, *et al*. Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality. Harvard Business School Working Paper, No. 24-013, 2023. Available online: https://www. hbs. edu/faculty/Pages/item.aspx?num=64700(accessed on 16 November 2026).

18 Autio E, Kenney M, Mustar P, *et al*. Entrepreneurial Innovation: The Importance of Context. *Research Policy* 2014; **43**(**7**): 1097–1108.

19 Polanyi M. *The Tacit Dimension*; Doubleday: Garden City, NY, USA, 1966.

20 Agrawal A, Gans JS, Goldfarb A. *Prediction Machines: The Simple Economics of Artificial Intelligence*; Harvard Business Review Press: Boston, MA, USA, 2018.

© The Author(s) 2026. Published by Global Science Publishing (*GSP*).

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.