Vol.7 Iss.6 2026 Communication & Education Review
https://doi.org/10.37420/j.cer.2026.090

Construction of a Differentiated Training Framework for Applied and Vocational Undergraduate Fintech Majors in Private Universities: A "Six-Dimensional Integrated" Analytical Model

Shunyue Yang, Zhong Yihui*
School of Fintech and Accounting, Guangdong University of Science and Technology
No. 99 Xihu Road, Dongguan, Guangdong 523000, China
***Corresponding Author, E-mail: 271917237@qq.com**

Abstract:
With the deepening of the classified development strategy of higher education in China, it has become common for private universities to simultaneously offer applied undergraduate and vocational undergraduate programs. However, both types of programs in fintech majors generally face the dilemma of homogenization in talent training models. Guided by the "Differentiated Positioning and Distinctive Development" strategy of private universities, and centered on the deep integration of "Business + Accounting + Technology" (BAT), this study constructs a "Six-Dimensional Integrated" dual-track differentiated training analytical model based on Competency-Based Education (CBE) theory, Outcome-Based Education (OBE) philosophy, and the theory of differentiated development. The model encompasses six dimensions: training objectives, curriculum systems, teaching models, practical teaching, faculty development, and evaluation systems. Through literature analysis, comparative research, and case verification, this study systematically elaborates the differentiated positioning logic, standard boundaries, and implementation paths for each dimension. The findings demonstrate that the proposed framework effectively addresses the homogenization challenge by establishing clear categorical boundaries between applied and vocational undergraduate programs while maintaining integration pathways for student mobility. This study provides a theoretical framework and practical reference for private universities to achieve complementary development of both program types in fintech education.

Keywords:
private universities; fintech education; differentiated positioning and distinctive development; differentiated training model; applied undergraduate; vocational undergraduate; six-dimensional integrated model; competency-based education

1. Introduction

The 20th National Congress of the Communist Party of China explicitly proposed to "coordinate the collaborative innovation of vocational education, higher education, and continuing education," establishing a clear direction for the classified development of higher education. This policy directive reflects a fundamental

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

shift in China's higher education philosophy, moving from a unified, one-size-fits-all approach toward a diversified, type-based development model that recognizes the distinct missions and characteristics of different program types. In 2021, the Ministry of Education issued the "Opinions on the Work of Higher Education Institution Establishment during the '14th Five-Year Plan' Period," which formally defined vocational undergraduate education as "vocational demand-oriented and practical competency-focused," creating a categorical distinction from applied undergraduate programs that emphasize theoretical foundations and comprehensive application capabilities.[2]

Guangdong Province, as one of China's regions with the largest concentration of private universities, has been at the forefront of this educational reform. By 2025, Guangdong had over 30 private undergraduate institutions, many of which simultaneously offered applied and vocational undergraduate fintech-related programs. This dual-track educational landscape has created both opportunities and challenges. On one hand, it provides students with more diverse educational pathways aligned with their career aspirations and aptitudes. On the other hand, it has exposed a critical problem: the homogenization of talent training models across both program types, which undermines the fundamental purpose of classified development.

The fintech sector, characterized by the deep integration of business knowledge, financial expertise, and technological skills, presents unique challenges for educational differentiation. The rapid evolution of financial technology, including artificial intelligence, blockchain, big data analytics, and cloud computing, demands graduates with varying competency profiles. Applied undergraduate programs should produce professionals capable of designing innovative fintech solutions and managing complex projects, while vocational undergraduate programs should produce skilled practitioners who can proficiently operate fintech systems and execute business processes. However, in practice, both types of programs in private universities commonly suffer from blurred institutional boundaries and convergent training models, resulting in graduates with similar competency profiles regardless of their program type.[1]

Specifically, the homogenization manifests in six key dimensions. First, training objectives overlap, with both program types targeting "composite financial talents" without clearly distinguishing the hierarchical differences between industry-level innovation and job-specific operations.[4] Second, curriculum structures are remarkably similar, featuring imbalanced ratios of theoretical to practical courses and lacking differentiated design based on disciplinary logic versus work-process logic.[3] Third, teaching models remain homogeneous, primarily relying on traditional classroom lectures with insufficient application of project-based, task-driven, and inquiry-based pedagogies.[11] Fourth, practical teaching platforms are shared without distinguishing the functional differences between research-oriented industry-academia collaboration and job-specific skills training. Fifth, faculty development follows a singular pathway, with a lack of differentiated mechanisms for cultivating "dual-competency" teachers who combine research and application capabilities with "dual-qualified" teachers who combine theoretical knowledge and practical skills.[12] Sixth, evaluation systems apply uniform standards, failing to establish differentiated assessment criteria adapted to the distinct training objectives of each program type.

This homogenization not only wastes limited educational resources but also constrains the distinctive development of private universities and the precise supply of fintech talents to the labor market. When graduates from both applied and vocational programs possess similar competency profiles, employers face difficulty in

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

distinguishing between them, leading to inefficient job-person matching and reduced return on educational investment. Moreover, the lack of differentiation undermines the policy rationale for maintaining both program types, as the supposed categorical distinctions become merely nominal rather than substantive.

In this context, how to construct a systematic differentiated training framework under the guidance of the "Differentiated Positioning and Distinctive Development" strategy, achieving complementary development of applied and vocational undergraduate fintech programs, has become a critical issue for private universities. This study addresses this gap by proposing a "Six-Dimensional Integrated" dual-track differentiated training analytical model. The model draws upon three theoretical foundations: Competency-Based Education (CBE) theory,[8] which provides the competency-centered framework for vocational program design; Outcome-Based Education (OBE) philosophy,[9] which offers the reverse-design methodology for applied program development; and the theory of differentiated development,[10] which supplies the strategic logic for categorical positioning.

2. Literature Review and Theoretical Foundation

2.1 Domestic Research Status

Domestic scholars have produced substantial research on various aspects of higher education reform relevant to this study. In the area of classified development, Pan Maoyuan and Che Rushan[2] proposed a foundational theoretical framework for the classified development of higher education, arguing that different types of universities should establish differentiated quality standards and training pathways aligned with their institutional missions. Their work laid the groundwork for understanding how universities can develop distinctive characteristics while maintaining educational quality. Zhou Jiansong[3] provided a comprehensive analysis of vocational undergraduate education, examining its categorical positioning, construction paths, and relationship with applied undergraduate programs. He emphasized that vocational undergraduate programs should construct curriculum systems centered on job competencies rather than academic disciplines, a principle that directly informs the curriculum differentiation strategy proposed in this study.

In the specific domain of fintech talent training, Li Jianjun and Peng Yuchu[4] analyzed the talent demand characteristics arising from the "Business + Accounting + Technology" integration in the fintech sector. Their research identified the key competency gaps in current fintech education and proposed cross-disciplinary curriculum design approaches that bridge finance, accounting, and information technology. Wang Chongrun and Zhao Ruiqing[5] explored practical teaching reform pathways for finance majors under the industry-education integration model, emphasizing the importance of real-world project involvement and university-enterprise cooperation. Zhong Yihui[1] summarized the "Demand-Guided, Five-in-One Collaboration" fintech university-enterprise cooperative education model based on the practice of Guangdong University of Science and Technology, providing a replicable framework for industry-education collaboration in fintech education. Liu Zhijing[6] investigated the "Industry-Education-Competition-Research-Creation" talent training model in the digital intelligence era, providing insights into how universities can integrate multiple educational resources to enhance talent quality.

However, existing domestic research still exhibits notable deficiencies when examined through the lens of

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

this study's focus. First, studies predominantly focus on individual courses or single teaching links, lacking comprehensive research on differentiated quality standards and dynamic monitoring mechanisms under the parallel dual-track undergraduate model. Second, vocational undergraduate research is mostly conducted in isolation, with few systematic comparisons with applied undergraduate programs and insufficient empirical research oriented toward the actual circumstances of private institutions. Third, classified development research tends to remain at the macro-theoretical level, failing to form implementable training paradigms for specific cross-disciplinary majors like fintech. Fourth, few studies successfully integrate the three strategic dimensions of differentiated positioning, industry-education integration, and digital transformation into a unified talent training system design.[6]

2.2 International Research Status

Internationally, several countries have developed mature classified training and quality assurance systems. Germany's dual system provides perhaps the most relevant model. German Fachhochschulen (Universities of Applied Sciences) and Universitäten (Traditional Universities) have established clear categorical distinctions in their training positioning, with explicit categorical boundaries in curriculum structure, faculty qualification requirements, graduation standards, and degree certification processes.[7] The American system offers another valuable perspective through its community college and four-year university transfer articulation mechanisms, which allow students to begin in application-focused programs and transfer for more advanced study. The UK's degree apprenticeship model combines academic study with workplace learning, ensuring graduates possess both theoretical knowledge and practical competencies. However, these international models operate within mature educational systems and do not directly address the unique challenges of Chinese private universities operating dual-track programs within single institutional frameworks.

2.3 Theoretical Foundation

This study draws upon three complementary theoretical frameworks. Competency-Based Education (CBE) Theory emphasizes vocational competency as the educational objective, competency standards as the basis for curriculum design, and competency achievement as the evaluation criterion.[8] In the context of this study, CBE theory provides the theoretical justification for the vocational undergraduate fintech program design, particularly the modular curriculum structure, task-driven teaching paradigm, and compliance-oriented evaluation model.

Outcome-Based Education (OBE) Philosophy, articulated by Spady,[9] emphasizes a learning-outcome-oriented approach to reverse-design curriculum systems and teaching processes. Unlike CBE's focus on occupational competencies, OBE focuses on the broader learning outcomes that students should demonstrate upon graduation, including cognitive abilities, professional skills, and personal attributes. The reverse-design principle of OBE ensures that the educational program is coherent and purposeful.

The Theory of Differentiated Development, originating from strategic management scholarship, refers to organizations avoiding homogeneous competition through differentiated positioning to form unique competitive advantages.[10] Applied to higher education, this theory suggests that institutions can enhance their effectiveness by developing distinctive educational offerings that serve different segments of the talent market.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3. Construction of the "Six-Dimensional Integrated" Differentiated Training Framework

3.1 Framework Design Philosophy

The "Six-Dimensional Integrated" framework follows the logical thread of "positional differentiation → system divergence → pathway adaptation → effectiveness verification." The six dimensions form an integrated system with clear internal logical connections. Training objectives serve as the logical starting point, determining the differentiation direction of the other five dimensions. Curriculum systems and teaching models are the core carriers that translate abstract objectives into concrete educational experiences. Practical teaching and faculty development are the key safeguards that ensure the feasibility and quality of implementation. The evaluation system is the closed-loop mechanism that verifies the achievement of training objectives and provides feedback for continuous optimization.

3.2 Training Objectives: Hierarchical Positioning

Applied undergraduate fintech programs target mid-to-high-level positions in the financial industry, cultivating composite innovative talents with capabilities in fintech solution design, business process optimization, and risk analysis and management.[4] These graduates are expected to serve as bridge professionals who can translate business needs into technical solutions. The training philosophy emphasizes "solid foundations, broad scope, and strong competencies." Graduates should independently undertake fintech project design and management within five years of graduation.

Vocational undergraduate fintech programs target job clusters in fintech enterprises, cultivating highly skilled applied talents with capabilities in financial business operations, technical tool application, system maintenance, and process execution.[3] These graduates are expected to serve as frontline professionals who can immediately contribute to organizational operations. The training philosophy emphasizes "refined skills, thorough process understanding, and proficient operations." Graduates should directly qualify for entry-level positions upon graduation.

The core differences can be summarized along four dimensions: competency orientation (design and innovation vs. operation and execution); market positioning (industry ecosystem vs. job clusters); cognitive emphasis (problem diagnosis vs. standardized operations); and career trajectory (management and strategic roles vs. technical expert and supervisory roles).

3.3 Curriculum Systems: Structural Divergence

Applied undergraduate programs adopt a "T-shaped" disciplinary logic curriculum structure.[4] The horizontal bar represents broad foundational knowledge across finance, computer science, and management. The vertical stem represents deep specialization in core fintech courses, including financial big data analysis, AI applications in finance, blockchain finance, and algorithmic trading systems. The curriculum arrangement follows the progressive logic of disciplinary knowledge, moving from theory to application and from foundational to specialized content.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

Vocational undergraduate programs adopt a "modular" work-process logic curriculum structure.[3] Rather than organizing content around academic disciplines, this structure anchors the curriculum to typical job clusters in fintech, such as financial data analysis, intelligent risk control operations, and payment system management. For each job cluster, the curriculum decomposes required competencies into specific skill elements organized into coherent learning modules.

The differentiation follows three principles: avoiding simple overlap between the two structures; maintaining integration pathways through shared general education and foundational courses; and establishing dynamic adjustment mechanisms to keep pace with industry evolution.

3.4 Teaching Models: Paradigm Differentiation

Applied undergraduate programs implement an "inquiry-based + project-based" teaching paradigm.[11] This paradigm uses real industry projects as vehicles for learning, immersing students in authentic problem contexts that require integration of knowledge from multiple disciplines. Typical scenarios include fintech solution design workshops, industry case studies, and enterprise R&D project participation. The teacher's role shifts from knowledge transmitter to learning facilitator and project mentor.

Vocational undergraduate programs implement a "task-driven + work-study alternation" teaching paradigm.[12] This paradigm uses enterprise business work orders as vehicles, transforming typical job tasks into structured teaching activities. Typical scenarios include business process simulation training, enterprise work order operations, and job skills compliance training. The teacher's role shifts from classroom instructor to skills coach and work order supervisor.

The differentiation extends to classroom forms and digital tools. Applied programs emphasize seminars, presentations, and solution defenses with data analysis platforms and simulation tools. Vocational programs emphasize demonstrations, practice, and skills assessments with business operating systems and process automation tools.

3.5 Practical Teaching: Platform Zoning

Applied undergraduate programs construct a "research-oriented industry-academia" practical system.[1] Students participate in fintech solution design, system prototype development, and data analysis report writing. The practical base emphasizes innovative laboratories and fintech R&D centers. Assessment focuses on project outcomes, research reports, and solution defenses.

Vocational undergraduate programs construct a "practical industry-education integration" practical system. Students enhance capabilities through on-the-job internships, skills competitions, and job-specific training. The practical base emphasizes simulation training rooms and job skills training centers. Assessment focuses on skills operation compliance, job performance evaluation, and 1+X certificate acquisition.

The recommendation is to upgrade campus training centers by establishing "Applied Innovation Zones" equipped with R&D tools and data analysis platforms, and "Skills Practice Zones" equipped with business operating systems and process simulation platforms. The two zones operate independently while sharing common infrastructure.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3.6 Faculty Development: Path Divergence

Applied undergraduate programs build "research + application" dual-competency faculty teams.[11] Faculty need solid theoretical foundations and fintech industry experience. Development pathways emphasize industry research projects, enterprise attachments, and academic exchanges. Vocational undergraduate programs build "skills + practice" dual-qualified faculty teams.[12] Faculty need rich enterprise work experience and excellent practical skills. Development pathways emphasize extended enterprise practice, skills certification, and technical problem-solving.

Supporting mechanisms include: differentiated recruitment standards (academic qualifications and research for applied programs; industry experience and practical skills for vocational programs); differentiated performance evaluation; and cross-track exchange mechanisms to promote integration of theory and practice.

3.7 Evaluation Systems: Standard Differentiation

Applied undergraduate programs adopt a "value-added + outcome-oriented" evaluation model.[9] This focuses on competency growth during studies, with learning outcomes as core indicators. Methods combine formative evaluation (classroom participation, project progress, periodic reports) with summative evaluation (graduation projects, solution defenses, industry expert reviews). Enterprise mentors participate in assessment. Student growth portfolios document competency development trajectories.

Vocational undergraduate programs adopt a "compliance + certificate-oriented" evaluation model. This focuses on whether students meet job competency standards. Methods include skills spot checks, 1+X certificates, and enterprise assessments. Learning big data platforms construct student growth profiles for precise, personalized evaluation.

Both systems require: scientific rigor through Delphi expert consultation and pilot verification; effective feedback mechanisms for continuous improvement; and comparability on a unified quality baseline for institutional quality monitoring.

4. Implementation Path and Safeguard Mechanisms

Phase 1 (1 year): Standard Development and Pilot Initiation. Develop classified construction guidelines, curriculum maps, teaching model guides, and evaluation rubrics. Select 1-2 program directions for pilot implementation. Phase 2 (1-2 years): Program Optimization and Comprehensive Promotion. Refine the framework based on pilot evidence and promote across all fintech programs. Develop supporting resources including faculty training programs and digital teaching tools. Phase 3 (beyond 2 years): Paradigm Refinement and Radiation Output. Synthesize experience into a replicable construction paradigm for dissemination to other institutions.

Four safeguard mechanisms: organizational (leadership group led by university management, coordinated by Academic Affairs Office, implemented by secondary colleges); institutional (classified construction management measures, faculty cultivation systems, funding guarantee systems); resource (differentiated allocation for training equipment, teaching platforms, and industry partnerships); and quality (internal monitoring

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

combined with external evaluation including industry advisory board reviews, employer satisfaction surveys, and peer institution comparisons).

5. Conclusion and Prospects

This study has constructed a "Six-Dimensional Integrated" dual-track differentiated training analytical model, integrating CBE theory,[8] OBE philosophy,[9] and the theory of differentiated development.[10] The core innovations are threefold: first, systematically embedding the "Differentiated Positioning and Distinctive Development" strategy into talent training system design, forming a complete logical closed loop from hierarchical positioning to standard differentiation; second, designing differentiated curriculum structures and teaching paradigms specifically tailored to fintech's BAT cross-disciplinary characteristics, avoiding simple convergence between program types; third, proposing classified construction pathways for "dual-competency" and "dual-qualified" faculty teams, addressing a critical but often overlooked dimension of educational differentiation.

Limitations include: the empirical verification is still at the pilot stage, requiring further testing through rigorous quasi-experimental designs; the framework is primarily based on Guangdong's private university experience, with applicability to other regions needing careful assessment; and digital teaching empowerment has not been independently incorporated as a seventh dimension. Future research directions include: large-sample empirical verification of framework effectiveness; exploration of AI-empowered differentiated teaching pathways; extension to related majors such as financial engineering and digital economics; and international comparative studies drawing on mature experiences from developed countries' private universities.

Funding

Guangdong Private Education Association 2026 Annual Research Project (GMG2026019)

Guangdong Higher Education Association "15th Five-Year Plan" 2026 Annual Research Project (2026GJXH499)

Guangdong University of Science and Technology 2025 Teaching-Research Integration Project (GKJXXZ2025008)

Guangdong University of Science and Technology 2026 Teaching Reform Special Project (GKZLGC2026016)

References

[1]Zhong, Y. H. (2025). Research and Practice of "Demand-Guided, Five-in-One Collaboration" Fintech University-Enterprise Cooperative Education Model. Q & A and Guidance, (9), 1-5.

[2]Pan, M. Y., & Che, R. S. (2009). Strengthening Local Undergraduate Universities: Positioning and Characteristic Development of Local Undergraduate Universities. China Higher Education, (12), 16-18.

[3]Zhou, J. S. (2022). Thoughts and Paths for Steady Development of Vocational Undergraduate Education.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

China Higher Education Research, (2), 32-37.
[4]Li, J. J., & Peng, Y. C. (2021). Fintech Discipline Construction and Talent Training. China University Teaching, (3), 14-19.
[5]Wang, C. R., & Zhao, R. Q. (2023). Exploration of Practical Teaching Reform for Finance Majors under the Background of Industry-Education Integration. Finance Theory and Teaching, (2), 85-89.
[6]Liu, Z. J. (2025). Research on the Training Model of "Industry-Education-Competition-Research-Creation" for New Quality Talents in the Digital Intelligence Era. Q & A and Guidance, (12), 1-4.
[7]Teichler, U. (2015). Higher Education Systems: Conceptual Frameworks, Comparative Perspectives, and Empirical Findings. Rotterdam: Sense Publishers.
[8]Huang, K. X. (1996). Theory and Practice of Competency-Based Education (CBE). Educational Research, (6), 62-67.
[9]Spady, W. G. (1994). Outcome-Based Education: Critical Issues and Answers. Arlington: American Association of School Administrators.
[10]Porter, M. E. (2014). Competitive Strategy (X. Y. Chen, Trans.). Beijing: CITIC Press.
[11]Zhong, Y. H. (2025). Practice of Curriculum Ideology and Politics in Industry-Education Integration: A Case Study of Financial Securities Practice Course. China Images, (8).
[12]Zhong, Y. H. (2024). Design of Cloud Data Storage Security and Financial Risk Control Management. International Journal of Cloud Computing and Services Science.

© 2026 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)