

Narrative Reconstruction and Competency Integration: Research on the Cross-Border Employment Guidance Model for Technical Students Under Career Construction Theory

Tian Tian, Shanshan Hao, Huanhuan Yan, Yuwei Shang

Xi'an International University, Xi'an 710077, Shaanxi, China

**Author to whom correspondence should be addressed.*

Copyright: © 2026 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: With increasingly blurred occupational boundaries in the digital age, technical students face the contradiction between cognitive lock-in of “professional relevance” and the surge in cross-border demand. Based on Career Construction Theory, this paper constructs and verifies a four-stage guidance model of “cognitive deconstruction—advantage identification—narrative reconstruction—path creation” through a qualitative case study of undergraduate-upgraded students majoring in computer science. The research finds that through narrative intervention, the model can effectively guide students to break disciplinary identity lock-in and realize the creative transformation of professional abilities into composite capital. This paper further refines the three-dimensional mechanism of narrative reconstruction, providing an operable, practical path for the transformation of employment guidance for technical majors from “job matching” to “career construction”.

Keywords: Career construction; Cross-border employment; Narrative reconstruction; Technical majors; Composite capital

Online publication: February 4, 2026

1. Problem proposal: Structural contradictions and guidance deficiencies

The in-depth integration of artificial intelligence and the digital economy is driving structural changes in the labor market. On the one hand, the demand for cross-border positions such as “technology + education” and “technology + cultural and creative industries” is growing rapidly; on the other hand, technical students are facing a declining success rate in traditional professional counterpart job hunting^[1]. This paradox reveals deeper systemic contradictions: the conflict between the rapidly evolving occupational ecology and the relatively rigid “professionalism” training model, as well as the misalignment between students’ dynamic and diverse developmental potential and the static and single “person-job matching” guidance paradigm^[2]. Current university

employment guidance mostly focuses on transactional services, lacking systematic cultivation of students' "career adaptability". Technical students often fall into the cognitive lock-in of "non-technical positions mean failure" due to "strong professional identity", and their internalized transferable abilities (such as logical thinking and systematic analysis) have not been effectively identified and transformed^[3]. Therefore, exploring a new guidance model that can help students break cognitive boundaries, actively integrate resources, and realize the creative transformation of abilities has become a crucial issue to be solved.

2. Literature review and theoretical framework

The theoretical paradigm of employment guidance has continuously evolved with changes in the labor market. The early "person-job matching" theory represented by Holland emphasized the static fit between individual traits and the environment, providing a basic model for career choice. However, in the current era of fluid occupational boundaries, its explanatory power has shown limitations. Subsequently, Career Adaptability Theory shifted the focus to the psychological resources of individuals in responding to career changes, emphasizing the importance of traits such as flexibility, curiosity, and confidence, providing a key perspective for understanding dynamic employment^[4].

In recent years, Career Construction Theory has achieved further breakthroughs, viewing career development as a continuous construction process in which individuals actively integrate past experiences, current situations, and future expectations through narratives. This theory operationalizes "adaptability" into specific narrative reconstruction practices, providing a direct starting point for intervention^[5]. Domestic research has also followed this trend. For example, Zhang et al. (2022) demonstrated that a guidance model centered on career adaptability can significantly improve the employment satisfaction of technical students, confirming the local applicability of the theory.

At the same time, scholars have conducted in-depth analyses of the specific phenomenon of "cross-border employment" from a capital perspective. The "composite capital" theoretical framework proposed by Huang et al. (2021) is quite representative, deconstructing cross-border competitiveness into the organic integration of professional skill capital, general ability capital, and interest resource capital^[6]. This framework clearly points out that the core of cross-border success lies in the creative transformation and integration of abilities. Recent studies have further refined the core element characteristics of technical groups: Wang et al. (2024) published "A New Exploration of the Transferable Competency Structure of Technical Majors" in China Higher Education Research, adding two new dimensions—"technical ethical judgment" and "cross-platform adaptation ability"—through the Delphi method and factor analysis, and verifying that their predictive power in emerging cross-border fields such as "technology + cultural and creative industries" and "technology + medical care" exceeds 20%^[7]; Zhao et al. (2025) published "The Impact Mechanism of Composite Capital on Cross-Border Employment of Higher Vocational Technical Students" in Research in Educational Development, finding through tracking 120 graduates that the interaction effect of "professional skill capital × interest resource capital" can increase the cross-border employment success rate by 41%, clarifying the key value of the integration of these two types of capital^[8].

Although existing research has clarified the core elements, there are still two major research gaps: first, the lack of differentiated analysis for technical majors. The transferable abilities of technical students have characteristics such as "technical dependence" and "strong logic", and their transformation paths are essentially different from those of liberal arts students. Most existing studies adopt a unified framework; second, the lack of

a phased transformation model, mostly staying at the conceptual level of “what abilities should be cultivated”, and insufficient process research on “how to promote the transformation of abilities from cognition to action”—this is the core gap that this paper attempts to fill.

3. Research methods: Case selection and qualitative analysis

This study adopts an instrumental case study method, selecting a student surnamed Wang, an undergraduate-upgraded student majoring in computer science at a university, as the research object. The student is representative: he has solid programming skills and project award experience, and is also a guzheng teacher with five years of teaching experience, but fell into anxiety and self-denial due to repeated setbacks in technical job hunting. The study collects data through triangulation: conducting three semi-structured in-depth interviews, analyzing personal documents (resumes, planning books, teaching cases), and recording eight counseling logs participated in by the researcher. NVivo software was used for three-level coding of the data, and finally a theoretical model centered on “narrative reconstruction promoting ability transformation” was formed with a coding reliability coefficient of 0.89, ensuring the rigor of the research.

4. Research findings: Practical verification of the four-stage model

4.1. Initial dilemma: Binary oppositional career narrative

In the early stage of counseling, Wang presented a binary split career narrative of “negative technology + positive guzheng”, which runs through three dimensions: cognition, emotion, and behavior^[9]. Cognitively, he formed the perception of an “unqualified practitioner” due to six failed job hunting attempts (including three final interview failures) in the technical field, binding five years of professional investment and family expectations; his guzheng teaching was recognized by students but defined as a “frivolous side job” that could not be incorporated into his core professional identity. Emotionally, he suffered from moderate anxiety (SAS scale score of 68), accompanied by symptoms such as insomnia and avoidance of job hunting information^[10]. Behaviorally, he fell into a vicious cycle of “blindly submitting 42 technical job resumes—only 6 interviews—no offers—self-denial”, deliberately avoiding career planning topics, forming a typical “boundary dilemma”.

4.2. Cognitive deconstruction: Three-fold questioning strategy to break professional lock-in

This stage focuses on breaking the cognition of “major = occupation”, achieving cognitive breakthrough through three-fold questioning: “traceability—abstraction—transfer”. Traceability questioning starts with his experience in developing a campus attendance system, guiding him to recall the successful experience of “debugging cross-terminal compatibility issues”, weakening the negative cognition of job hunting failures; abstraction questioning further guides him to refine transferable abilities such as logical reasoning and systematic analysis, breaking the cognition that “technical abilities are only applicable to technical positions”; scenario transfer questioning combines the scenario of guzheng teaching design “developing a student practice check-in system”, enabling him to independently propose functional concepts such as “progress tracking and automatic error correction”, achieving a key cognitive breakthrough. The log clearly records the new cognition that “programming can help me optimize teaching”, laying the foundation for advantage integration^[11].

4.3. Advantage identification: Three-dimensional mapping of composite capital

Based on the results of cognitive deconstruction, the “ability—interest—value” three-dimensional mapping method was used to identify synergistic effects: sorting out 5 professional abilities such as Java programming and system development, and 4 interest abilities such as curriculum design and student management, clarifying the core values of guzheng teaching, “sense of educational achievement and resource accumulation”; through correlation matrix analysis, three integration points were identified—using programming abilities to develop teaching management systems, using systematic thinking to design stepped courses, and using project management experience to optimize the closed loop of teaching services ^[12]. This process enabled Wang to clarify that “professional abilities are the core competitiveness for interest development”, realizing the cognitive transformation of professionalism and interests from “opposition” to “complementarity”.

4.4. Narrative reconstruction: Generation of composite identity

Narrative upgrading was completed through three “career story writing” exercises: from the initial split expression of “failed technician + guzheng teacher”, to the attempted integration of “using programming to make teaching spreadsheets”, and finally forming a composite narrative of a “creative educator with technical thinking”. In the new narrative, the computer major became the cross-border “meta-competence”, and guzheng teaching served as the carrier for ability implementation. The key turning point was his practical achievement—the student management system designed using database knowledge increased the institution’s renewal rate by 20%. After receiving recognition from the person in charge, he clearly recognized that “the bridge between technology and education is the core value”, and the composite identity was fully established^[13].

4.5. Path creation: Stepwise cross-border plan

A three-stage progressive path was designed in combination with the composite identity: short-term (1-2 years) ability implementation—joining a guzheng institution to lead the development of tools such as student tracking systems, obtaining a teacher qualification certificate simultaneously, and accumulating 500+ core students; medium-term (3–5 years) value amplification—establishing a studio to develop an “intelligent guzheng teaching system”, cooperating with educational technology companies for large-scale promotion, and becoming a regional benchmark; long-term (5+ years) ecological construction—transforming into a product manager in the art education track, leading APP research and development, and building a resource docking platform, realizing the unification of technical, educational, and commercial values. The stepwise design effectively reduces cross-border risks and ensures ability iteration ^[14].

4.6. Transformation effect: Systematic changes in cognition-emotion-behavior

After counseling, systematic transformation was achieved in three dimensions: cognitively, the score of “cognition of professional ability transfer” increased from 2.3 to 4.6 (5-point scale), establishing an “ability-oriented” cognition; emotionally, the SAS scale score dropped to 32 (normal range), relieving anxiety symptoms; behaviorally, the student management system he led after employment increased management efficiency by 40%, and the independently designed course recruited 120 students in 3 months, winning the institution’s innovation award. He also obtained the “Educational Informatization Engineer” certificate, realizing a fundamental transformation from “passive job hunting” to “active career creation”, verifying the practical effectiveness of the model^[15].

5. Discussion and implications: Core mechanisms and guidance transformation

5.1. Three-dimensional core mechanism of narrative reconstruction

This case vividly demonstrates how Career Construction Theory is transformed from theory to practice. Through the core mechanism of “narrative reconstruction”, it helps students integrate fragmented experiences into meaningful stories and reconstruct “problems” (conflicts between professionalism and interests) into “resources” (composite capital). This process not only solves the immediate job hunting dilemma but also enhances students’ career adaptability—the ability to continuously adjust, learn, and grow in the face of an uncertain future^[16].

(1) Experience Integration Mechanism: Through methods such as “tracing successful events” and “interpreting contradictory experiences”, the negative experience of failed technical job hunting is reconstructed into a neutral cognition of “insufficient job matching”, and the successful experience of guzheng teaching is refined into “educational abilities and resource advantages”, realizing the transformation of opposing experiences into composite capital, which echoes the “career adaptability mediating effect” theory proposed by Professor Fan Weiqiao’s team.

(2) Meaning Attribution Mechanism: By establishing the value connection between professional abilities and interest scenarios, it provides meaning support for cross-border identities. For example, endowing Java programming ability with the new meaning of “a tool to improve teaching efficiency”, solving the core pain point of “ambiguous cross-border value of professional abilities” among technical students.

(3) Action Activation Mechanism: Adopting a closed-loop design of “small-step practice + result feedback”, such as first completing the development of small-scale teaching tools to obtain positive feedback, then advancing curriculum research and development, forming a virtuous cycle of “narrative reconstruction—action practice—feedback reinforcement”, making up for the deficiency of existing research that “emphasizes cognition over action”.

5.2. Focus transformation of employment guidance for technical majors

Based on model practice, a three-dimensional optimization path for technical employment guidance is proposed:

- (1) Cultivation of Transferable Abilities: Construct a three-stage plan of “identification—coding—application”, extracting abilities from professional projects and transforming them into practical applications;
- (2) Curriculum System Innovation: Build a three-layer curriculum of “general education + professionalism + cross-border integration”. The general education layer offers special courses such as “Career Narrative and Cross-Border Employment”; the professional layer embeds transfer training modules in courses such as “Database Principles”; the cross-border layer cooperates with education and cultural and creative colleges to offer micro-majors such as “Technology + Art”.
- (3) Resource Ecosystem Construction: Build a “campus—enterprise—society” linkage platform, co-establish cross-border internship bases with educational technology enterprises, cultivate “narrative catalyst” type counselors, and introduce social resources to set up “cross-border entrepreneurship funds”, realizing the transformation of guidance from “campus closed-loop” to “open linkage”.

5.3. Optimization path of university employment guidance systems

Universities need to shift from “transactional services” to “subjectivity cultivation”, constructing a full-chain guidance system:

- (1) Curriculum Innovation: Add modules such as “identification of transferable abilities” and “career

narrative writing”, and embed “cross-border application of technical abilities” cases in professional courses;

- (2) Counseling Model Upgrade: Establish a mechanism of “individual narrative counseling + group ability workshops” and cultivate a team of counselors with narrative skills;
- (3) Resource Integration: Link with cross-border enterprises such as educational technology and cultural and creative industries to build internship bases, regularly hold “technical cross-border success lectures”, and create a campus culture of “diverse career success”.

6. Conclusion

Through the case verification of undergraduate-upgraded computer science students, this study confirms that the four-stage model of “cognitive deconstruction—advantage identification—narrative reconstruction—path creation” can effectively solve the cross-border employment dilemma of technical students. Research innovations: first, constructing a phased model exclusive to technical majors, focusing on the characteristics of “technical ability dependence” and clarifying practical methods; second, revealing the three-dimensional mechanism of narrative reconstruction and refining the ability transformation path of technical students; third, expanding research on the undergraduate-upgraded group, providing a perspective for differentiated guidance. The research limitation is the limited representativeness of a single case. In the future, it is necessary to verify the universality through multi-professional cases, conduct long-term tracking, and develop group counseling programs.

In the digital economy era, the “lifetime single job” model has collapsed. The core of university employment guidance should shift to “empowering self-career constructors”. The essence of the employment dilemma of technical students is a “cognitive and narrative dilemma”. The four-stage model promotes the transformation of professional abilities into cross-border capital through cognitive breakthroughs, advantage connection, identity shaping, and path implementation. When technical students create value with a composite identity of “technology + scenario”, they can not only solve personal dilemmas but also provide talent support for industrial integration—this is the core direction of the transformation of the employment guidance system.

Funding

2025 Shaanxi University Student Work Research Project, “Research on the Mechanism of Counselors’ Role in Promoting College Students’ High-Quality Employment” (Project No.: 2025XKT196)

Disclosure statement

The author declares no conflict of interest.

References

- [1] Zhang M, Liu F, 2022, The Transformation of College Students’ Employment Guidance from the Perspective of Career Adaptability. *Educational Theory and Research*, 44(3): 58–65.
- [2] Savickas M, 2013, Life Designing: A Paradigm for Career Intervention in the 21st Century. *Journal of Counseling*

& Development, 91(1): 23–31.

- [3] Yue C, 2020, The Transformation of University Employment Guidance: From Person-Job Matching to Ability Construction. *Higher Education Research*, 41(7): 83–90.
- [4] Huang Z, Wang Z, 2021, The Generation Mechanism and Cultivation Path of College Students' Composite Capital. *Educational Theory and Research*, 43(5): 45–52.
- [5] Lent R, Brown S, 2019, Social Cognitive Career Theory at 25: Progress in Studying the Domain of Career Behavior. *Journal of Career Assessment*, 27(4): 563–578.
- [6] Chen Y, Lin W, 2025, The Impact of Narrative Counseling on Cross-Border Decision-Making of Computer Science Students. *Vocational and Technical Education*, 46(1): 58–65.
- [7] Wang L, Zhang M, 2024, A New Exploration of the Transferable Competency Structure of Technical Majors. *China Higher Education Research*, (7): 89–96.
- [8] Zhao X, Wu T, 2025, The Impact Mechanism of Composite Capital on Cross-Border Employment of Higher Vocational Technical Students. *Research in Educational Development*, 45(2): 70–77.
- [9] Li Y, Zhang B, 2020, Professional Lock-In and Employment Breakthrough: Research on the Cognitive Barriers of College Students' Cross-Border Employment. *Research in Educational Development*, 40(12): 65–72.
- [10] Wang L, Chen H, 2023, Construction of an Evaluation System for Transferable Abilities of Technical Major Students. *Educational Theory and Research*, 45(7): 69–76.
- [11] Liu Y, Zhang X, 2021, Research on the Application of Narrative Counseling in College Students' Career Planning. *Educational Theory and Research*, 43(11): 53–60.
- [12] Super D, 1980, A Life-Span, Life-Space Approach to Career Development. *Journal of Vocational Behavior*, 16(3): 282–298.
- [13] Chen J, Li F, 2022, Research on the Innovation of University Cross-Border Employment Guidance Service System. *China Higher Education*, (10): 45–47.
- [14] Li H, Liu M, 2024, The Cultivation Path of Career Adaptability for Technical Students in the AI Era. *Research in Higher Education of Engineering*, (3): 135–142.
- [15] Chen S, Wang L, 2020, Cultivating Composite Talents: An Exploration of the Path of Interdisciplinary Reform in Higher Education. *Tsinghua Journal of Education*, 41(4): 118–124.
- [16] Zhao J, Sun W, 2019, Career Adaptability: Concept, Measurement, and Cultivation Strategies. *Advances in Psychological Science*, 27(8): 1377–1390.

Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.