

THE EFFECT OF FLEXIBLE WORKING ARRANGEMENTS ON JOB SATISFACTION OF WORKING FEMALE

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Abstract

This study explores the concept and application of the learning organization (LO) in higher vocational colleges in China within the context of ongoing educational reforms and digital transformation. Drawing upon Senge's five disciplines and the Dimensions of the Learning Organization Questionnaire (DLOQ) developed by Watkins and Marsick, the paper reviews theoretical perspectives, policy drivers, and empirical evidence to assess how LO practices contribute to institutional development. The 2019 Implementation Plan on National Vocational Education Reform and the "Double High Plan" have positioned higher vocational colleges at the forefront of quality assurance, performance management, and industry collaboration. Literature indicates that dimensions such as team learning, embedded systems, and strategic leadership play a pivotal role in fostering innovation, program renewal, and school-enterprise integration. However, critical gaps exist: contradictions in the cultural adaptation of the DLOQ (e.g., debates between Li & Lu's (2007) "governance-oriented" dimension and Song et al.'s (2009) retention of seven core dimensions); insufficient analysis of how policies like the "Double High Plan" translate into on-the-ground LO practices; and limited empirical evidence of causal links between LO mechanisms and hard outcomes (e.g., employer satisfaction). This review synthesizes existing studies into a China-specific LO schema that emphasizes leadership direction (aligned with Double High KPIs), inquiry cycles (enabled by digital tools), digital infrastructures (as organizational memory), and external partnerships (tied to labor-market needs). Findings underscore the importance of aligning LO practices with national policy priorities and suggest practical implications for administrators to institutionalize continuous learning. The study contributes to theory by addressing DLOQ cultural adaptation debates and to practice by providing actionable steps for bridging policy and LO implementation.

Keywords: Higher vocational colleges, Learning organization, Total Quality Management, Student management

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INTRODUCTION

Since the State Council's Implementation Plan on National Vocational Education Reform (2019), higher vocational colleges in China have faced intensified expectations to enhance quality, strengthen school–industry collaboration, and align with strategic workforce needs (Ministry of Education of the PRC, 2019). These pressures highlight the importance of adopting the LO concept as a management framework. According to Senge (2010), learning organizations cultivate five interrelated disciplines—systems thinking, personal mastery, mental models, shared vision, and team learning—that enable institutions to adapt to complexity. To operationalize these ideas, Watkins and Marsick's DLOQ (2003) measures seven dimensions: continuous learning, inquiry and dialogue, team learning, embedded systems, empowerment, system connection, and strategic leadership.

The launch of the “Double High Plan” has further accelerated LO adoption, emphasizing performance-based management, digital transformation, and entrepreneurship education—aligning closely with DLOQ's system connection and strategic leadership (Huang, An, & Wang, 2021). However, existing research lacks a unifying core argument to integrate these policy and theoretical elements. This paper addresses this gap by advancing a central proposition: The effectiveness of LO in Chinese higher vocational colleges depends on integrating three pillars—policy alignment (Double High/AI education goals), digital enablement (platforms/dashboards), and cross-level collaboration (leadership→teams→enterprises)—to resolve cultural adaptation challenges and regional disparities. This proposition guides the review, ensuring that theoretical, policy, and empirical analyses converge to explain how LO strengthens institutional competitiveness and sustainability.

LITERATURE REVIEW: LEARNING ORGANIZATION IN HIGHER VOCATIONAL COLLEGES IN CHINA

The LO concept describes organizations that expand capacity for desired results through disciplined inquiry and collective learning (Senge, 2010). Senge's five disciplines map to college routines (e.g., teaching–research groups, school–enterprise partnerships) where distributed expertise drives improvement. Watkins and Marsick's DLOQ (2003) translates these into seven measurable dimensions, with validation across sectors and cultures—including Asian contexts—when rigorous translation protocols are followed (Song et al., 2009; Leufvén et al., 2015).

1. Critical Analysis of DLOQ Cultural Adaptation in China

While the DLOQ's seven-dimensional structure is generally recoverable in China, contextual disputes require critical examination: Li & Lu (2007) found that mainland Chinese colleges exhibit a “governance/administration emphasis” as an emergent dimension, arguing that centralized education governance (e.g., Ministry of Education directives) makes administrative coordination a core LO practice—distinct from Western LO models that prioritize individual empowerment. Song et al. (2009) challenged this, finding that the seven original DLOQ dimensions remain valid when items are adjusted for linguistic clarity (e.g., rephrasing “empowerment” to “teacher participation in curriculum decisions” to reflect Chinese institutional norms).

This contradiction stems from sample differences: Li & Lu's (2007) study focused on under-resourced western colleges (where administration drives LO due to limited teacher autonomy), while Song et al. (2009) sampled eastern colleges (with more decentralized decision-making). These findings highlight that DLOQ adaptation must account for regional governance contexts—a gap in existing literature that this review addresses by integrating regional variation into the China-specific LO schema.

2. Digital Transformation and LO: Unresolved Tensions

Recent literature on digital transformation (Ma, 2025; Yan, 2025) links platforms (LMS/ERP) and data dashboards to LO, but tensions persist: Ma (2025) argues that “infrastructure first” is critical—digital platforms must be built before LO practices (e.g., team learning) can scale, as they reduce collaboration costs and store organizational memory. Yan (2025) counters that “capacity first” is needed—teachers must develop data literacy to use platforms effectively; otherwise, digital tools become “empty vessels” (e.g., dashboards ignored due to lack of training).

This tension underscores a need for integrated digital-LO strategies, which this paper's schema addresses by framing digital infrastructures as both “tools” and “enablers of teacher capacity building.”

POLICY DRIVERS IN CHINA'S VOCATIONAL EDUCATION

China's 2019 Implementation Plan on National Vocational Education Reform (the “20 Articles”) marks an inflection point for higher vocational education (gaozhi). The reform aims to expand high-level institutions, standardize quality frameworks, strengthen school–industry integration, and improve graduate employability—conditions that implicitly reward organizational learning (Ministry of Education of the PRC, 2019; SCIO, 2019). Subsequent guidance elevated VET as a national priority and reinforced performance-oriented governance, incentivizing systematic data use and cross-boundary collaboration (Gov.cn, 2023). In parallel, policy discourse and sector research emphasize digital transformation—the deployment of platforms (LMS/ERP), data dashboards, and AI-enabled practices—to build organizational memory and real-time feedback loops (Ma, 2025; Yan, 2025). In 2025 the Ministry of Education announced a push to integrate AI across the education system, signaling stronger expectations for data-informed teaching and institutional capability building (Reuters, 2025a). Together, these policies provide external impetus for colleges to institutionalize LO routines (e.g., inquiry cycles, embedded knowledge systems, and system connection with enterprises). A signature initiative within the reform package is the “Double High Plan”, which designates and funds high-level colleges/majors and manages them through explicit KPIs. Recent studies and institutional reports describe how Double High construction pushes colleges toward outcome-oriented management, datafication, and systematic project performance management—all tightly coupled with DLOQ dimensions like embedded systems and strategic leadership (David Publishing, 2024; Huang et al., 2021). Emerging case work also documents strategy alignment and resource integration under Double High, although much of this literature is descriptive and would benefit from stronger causal designs (Li & Watt, 2025).

LEARNING ORGANIZATION MEASUREMENT IN CHINESE HIGHER VET

The DLOQ remains the dominant empirical lens for assessing LO in education and training organizations. For China's higher vocational colleges, three issues recur:

1. **Construct Validity and Adaptation.** Cross-cultural validations suggest that the seven-dimension structure is generally recoverable, but item wording and factor cross-loadings may require contextual tuning (Song et al., 2009; Yang et al., 2004). Mainland China evidence indicates that locally salient dimensions can emerge (e.g., governance/administration emphasis), reminding researchers to combine CFA with qualitative probe-testing (Li & Lu, 2007).

2. **Level of Analysis and Aggregation.** Colleges are multi-level systems (teacher, department, college). Studies that only analyze individual responses risk misattributing effects. Best practice is to assess within-group agreement (e.g., rwg, ICCs) before aggregating to departments or colleges, then employ HLM or multigroup SEM to test relationships among DLOQ factors, innovation behavior, and organizational outcomes (Song et al., 2009).

3. **Criterion Space.** Outcome measures often include teacher innovation behavior, curriculum renewal, school–enterprise collaboration, and employability services—targets articulated in policy (MOE, 2019) and widely discussed in sector research (Ma, 2025; David Publishing, 2024). Aligning outcomes to policy KPIs improves both relevance and construct representation, making results more actionable for Double High-performance cycles.

MECHANISMS: HOW LO CAPABILITIES TRANSLATE TO PERFORMANCE

The literature identifies several plausible mechanisms linking LO to performance in Chinese higher VET:

1. **Strategic Leadership → Team Learning / Inquiry & Dialogue → Innovation.** Leaders who signal priorities and create psychological safety for inquiry stimulate teaching–research groups and cross-unit projects that, in turn, generate curriculum innovations and pedagogical improvements (Watkins & Marsick, 2003; Song et al., 2009). In Chinese VET, this mechanism is reinforced by performance contracts and external evaluations under Double High (David Publishing, 2024).

2. **Embedded Systems as Organizational Memory.** Digital platforms (LMS/ERP/data dashboards) act as memory and feedback infrastructures that capture lessons learned and spread them across departments, reducing reinvention costs and supporting continuous quality improvement (Ma, 2025; Yan, 2025). The AI-across-education push further strengthens this mechanism by mainstreaming data-informed instruction and analytics literacy (Reuters, 2025).

3. **System Connection & External Partnerships.** LO emphasizes boundary-spanning collaboration. In VET, school–enterprise integration generates authentic learning problems, co-developed curricula, and iterative after-action reviews with industry mentors—practices that align with Double High's KPI logic (MOE, 2019; Huang et al., 2021).

Overall, these mechanisms imply that the returns to LO should be stronger in colleges with (a) clearer strategic alignment (Double High), and (b) deeper digital transformation that lowers the cost of learning and diffusion.

EMPIRICAL PATTERNS AND GAPS

Empirical patterns. Studies consistently find positive associations between LO scores and organizational outcomes (innovation behavior, collaboration intensity, curriculum renewal). While much evidence is cross-sectional, multi-site analyses and case syntheses in Chinese VET increasingly report that team learning and embedded systems are the most proximal predictors of improvement, with strategic leadership operating through these levers (Song et al., 2009; Yang et al., 2004; David Publishing, 2024; Huang et al., 2021). Digital-transformation research similarly links data infrastructure and platform usage to governance capacity and instructional quality (Ma, 2025; Yan, 2025a).

Evidence gaps. Four limitations recur:

1) Causality. Most studies are correlational; panel or quasi-experimental designs are rare. With policy shocks (e.g., Double High designation; AI integration), interrupted time-series or difference-in-differences designs are feasible.

2) Multilevel Modeling. Despite nested structures, many papers analyze at only one level. Future work should use HLM/SEM with cross-level interactions (e.g., department climate \times college governance).

3) Outcome Breadth. Few studies include hard outcomes (graduate employment quality, employer satisfaction) or external rater data (enterprise partners).

4) Geographic Variation and Equity. Digital readiness and industry ecosystems vary widely by province; comparative studies (e.g., eastern vs. western provinces) are needed to test the context sensitivity of LO mechanisms. The 2025 national skills initiatives aimed at rural labor and regional rebalancing could provide natural experiments and new indicators (Reuters, 2025b).

SYNTHESIS: A CHINA-SPECIFIC LO SCHEMA FOR HIGHER VET

Bringing together theory and policy, a China-specific LO schema for higher vocational colleges can be articulated:

1) Strategic Leadership (governance) sets direction using Double High KPIs and AI/digital priorities (Gov.cn, 2023; Reuters, 2025).

2) Inquiry & Dialogue and Team Learning operationalize direction via PLCs, teaching–research groups, and cross-unit projects (Watkins & Marsick, 2003; Song et al., 2009).

3) Embedded Systems (digital infrastructure) codify and diffuse learning through platforms and dashboards (Ma, 2025; Yan, 2025).

4) System Connection integrates external stakeholders (enterprises/associations) and ties learning to labor-market outcomes (MOE, 2019; Huang et al., 2021).

Under this schema, strategic leadership effects are partially mediated by inquiry/team learning and amplified by digital maturity—testable propositions that align with both LO theory and China’s governance context.

IMPLICATIONS FOR RESEARCH AND LEADERSHIP PRACTICE

For researchers, the review suggests CFA-validated DLOQ adaptations, multilevel designs, and policy-aligned outcomes (e.g., enterprise-validated internship quality, placement quality measures). For leaders, a pragmatic playbook includes: (a) a college LO charter linking Double High/AI goals to DLOQ dimensions; (b) quarterly learning audits (evidence of inquiry cycles, cross-unit projects, diffusion artifacts); and (c) embedded knowledge

systems (knowledge bases, process maps, data dashboards) to convert projects into institutional memory. These steps directly respond to China's performance-oriented and digitally enabled VET governance.

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