# Optimising the Content of Traditional Rehabilitation Technology Courses in Higher Vocational Education: A Competency-Oriented Approach

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**Abstract**: Driven by the expansion of the health industry, primary-level rehabilitation posts are generating rapidly growing demand for practitioners of traditional Chinese rehabilitation, and the Traditional Rehabilitation Technology course in higher vocational colleges is the key to preparing that workforce. The course currently suffers from outdated content, a disconnect between theory and practice, and weak alignment with job requirements. Taking job competency as its organising principle, this paper analyses these problems and proposes an optimisation pathway covering content restructuring and the integration of posts, courses, certificates and competitions, so as to build a curriculum that fits the industry, strengthen students' employability, and provide a reference for teaching reform in the field.

**Keywords**: job competency orientation; higher vocational education; traditional rehabilitation technology; course content; optimisation pathway

## 0. Introduction

Against the backdrop of the comprehensive rollout of the Healthy China 2030 strategy, deepening population ageing and year-on-year growth in the demand for chronic disease rehabilitation, China's rehabilitation medicine sector has entered a stage of rapid development. Primary-level hospitals, community health service centres, health and wellness centres and traditional Chinese medicine (TCM) clinics have substantially increased their demand for practitioners of traditional rehabilitation technology. The Outline of the Healthy China 2030 Plan [1] proposed, for the first time, the "development of rehabilitation services with TCM characteristics". Centred on TCM theory, traditional rehabilitation technology covers such distinctive techniques as Tuina massage, moxibustion, cupping, Gua Sha and acupoint regulation. It is green, safe, broadly applicable and highly practical; it forms an important part of the modern rehabilitation service system and is a core course in the higher vocational programmes of Rehabilitation Treatment Technology and TCM Rehabilitation Technology.

Higher vocational education takes the cultivation of high-quality technical and skilled talent as its core mission and emphasises teaching oriented to job requirements. At present, the Traditional Rehabilitation Technology course mostly follows a discipline-based model, privileging theory over practice and updating its content slowly, with the result that students' learning is divorced from the workplace and their job competitiveness is weak. Drawing on the educational positioning of higher vocational programmes and on industry demand, this paper analyses the problems in the existing course and proposes an optimisation pathway, in order to shift teaching towards competency development, achieve precise alignment between talent cultivation and industry posts, and support the high-quality development of the programme.

## 1. Core Connotations of a Competency-Oriented Traditional Rehabilitation Technology Course

### 1.1 Core Components of Job Competency

Drawing on the National Occupational Skill Standards and on actual practice in primary-

level rehabilitation posts, the core competencies of traditional rehabilitation posts fall into three dimensions—professional skills, professional conduct and integrated application—which together constitute the job competency system. Professional skills are central: students must master Tuina massage, moxibustion, cupping, Gua Sha and acupoint regulation, and must be able to formulate individualised plans and perform standardised procedures for orthopaedic injuries, chronic diseases, geriatric diseases and post-operative rehabilitation. Professional conduct is the foundation: it covers clinician–patient communication, medical safety, professional ethics, service standards and a sense of responsibility, all of which safeguard service quality and a harmonious clinician–patient relationship. Integrated application is the extension: students must be able to assess conditions, adjust plans, respond to emergencies and engage in lifelong learning, so as to adapt to different rehabilitation settings and solve real clinical problems.

### 1.2 Core Requirements of a Competency-Oriented Course

The core of competency-oriented course development is to break with the shortcomings of the traditional discipline-based curriculum—"emphasis on theory over practice, on system over application"—and to restructure course content and the teaching system around job tasks and competency development. Compared with the traditional model, such a course is more practical, more targeted and more applied: it streamlines redundant theory, focuses on high-frequency workplace tasks, and integrates occupational standards, industry norms, operating procedures and clinical cases into teaching, so that what students learn is what they use and what they practise is what the job requires. This helps students take up posts quickly and shortens employers' induction training.

### 1.3 Educational Value of the Traditional Rehabilitation Technology Course

The Traditional Rehabilitation Technology course is a core practical course in higher vocational rehabilitation programmes. It both transmits TCM theory and develops rehabilitation skills, and is the key course linking professional theory with clinical practice. Optimising its content and focusing on job competency can effectively improve students' practical skills and job fit, supply high-quality technical and skilled talent to primary-level rehabilitation medicine and health and wellness services, and support the high-quality development of the health industry.

## 2. Existing Problems in the Content of the Higher Vocational Traditional Rehabilitation Technology Course

### 2.1 Overly Discipline-Based Content Detached from Job Requirements

Most higher vocational colleges still follow the traditional TCM disciplinary system and organise content according to disciplinary logic, over-emphasising theoretical knowledge such as basic TCM theory and the tracing of classical texts while neglecting the actual requirements of clinical posts. Practical content—hands-on TCM rehabilitation techniques, rehabilitation plans for specific conditions, workplace operating standards and clinician–patient communication—accounts for a small share of the course. At the same time, the course does not differentiate between the requirements of hospitals, community health and wellness services and elderly care institutions: generic content predominates and post-specific content is insufficient, so that students' knowledge base is detached from the tasks they will face in a range of posts.

### 2.2 Fragmented Skill Modules and Insufficient Development of Integrated Application

The course tends to teach each technique as a separate module—Tuina, moxibustion and other skills are taught independently—without integration between modules. It emphasises single-technique drills and lacks practice in designing comprehensive plans on the basis of real cases or in combining techniques. Clinical posts, however, require the integrated use of several techniques based on syndrome differentiation. Fragmented teaching leaves students with weak capacity for integrated management and insufficient job competency.

### 2.3 Unreasonable Theory-Practice Ratio and Insufficiently Targeted Practical Teaching

Higher vocational education is centred on skill development, yet some colleges still allocate too many hours to theory and too few to practice in this course. Practical content is limited and consists mainly of standardised basic procedures and simulation-based drills, lacking real clinical practice, the management of complex cases and workplace emergency response. Because practical teaching is detached from the workplace, students can perform standard procedures competently but respond poorly to complex clinical problems and cannot apply their skills flexibly—they "can operate, but cannot apply".

### 2.4 Weak Integration of Posts, Courses, Certificates and Competitions, and a Single Assessment System

The General Offices of the CPC Central Committee and the State Council issued the Opinions on Promoting the High-Quality Development of Modern Vocational Education [2], which explicitly call for upholding the educational philosophy of "posts, courses, competitions and certificates with integrated cultivation". At present, the Traditional Rehabilitation Technology course is insufficiently aligned with vocational skill certificates and skill competition standards; certificate examination points and competition operating norms are not incorporated, so that teaching, certification, competition and workplace practice are disconnected. In addition, assessment relies mainly on written theory examinations and basic practical tests, and lacks assessment of such integrated competencies as case management, plan design and communication. It therefore cannot fully evaluate students' job competency or support precise improvement of teaching.

## 3. Basic Principles for Optimising Course Content under a Competency Orientation

### 3.1 Alignment with Job Requirements

Course content optimisation must take job requirements as its guiding principle. The work tasks, skill standards and professional conduct requirements of primary-level rehabilitation posts should be investigated in depth and a list of core job competencies compiled, on which the selection, deletion and addition of course content is then based. Redundant, outdated and workplace-irrelevant theory should be removed, while commonly used practical techniques, clinically relevant knowledge and workplace standards should be retained and strengthened, so that course content corresponds fully to workplace tasks and teaching content matches job requirements precisely.

### 3.2 Competency-Based Education

The principle of "competency as the foundation, learning for application" should be upheld. The constraints of the disciplinary knowledge system should be broken, and a course content system centred on the development of occupational competency should be reconstructed. Taking workplace workflows and typical work tasks as the main thread, theoretical knowledge and practical skills should be integrated; the systematic nature of knowledge should be downplayed and the practicality and applicability of skills emphasised. The focus should be on developing students' clinical practical ability, case management ability, comprehensive case management ability and professional conduct, thereby improving their overall job competency.

### 3.3 Integration of Posts, Courses, Certificates and Competitions

In an integrated "posts, courses, competitions and certificates" system, job requirements are the core source and provide the logical basis for setting courses, competitions and certificates, while courses, competitions and certificates are adjusted dynamically around job skills and professionalism [3]. The in-depth integration of occupational standards, course teaching, vocational certificates and skill competitions should be promoted in a coordinated way, and the assessment requirements of vocational skill level certificates, competition norms and clinical

workplace standards should be fully incorporated into course content. Certificate requirements should standardise teaching standards, skill competitions should refine practical precision, and job requirements should ensure that content is practical, so as to build a four-in-one curriculum and achieve the coordinated improvement of students' professional skills, certification readiness and job fit.

## 4. Optimisation Pathways for the Content of the Higher Vocational Traditional Rehabilitation Technology Course under a Competency Orientation

### 4.1 Investigating and Mapping Job Competency Standards to Precisely Target Course Optimisation

Job competency standards are the core basis for optimising course content, and systematic investigation is needed to identify core job requirements. First, a development team composed of programme teachers, clinical experts, industry specialists and enterprise mentors should be formed to investigate, through questionnaires, interviews and job-shadowing, the typical work tasks, skills and professionalism requirements of primary-level rehabilitation posts. Second, national teaching standards and occupational skill standards should be benchmarked, and, in the light of industry trends, job competency should be decomposed into five dimensions—theory, practical operation, case management, communication and service, and professional conduct—to form a standardised competency system. Finally, existing courses should be reviewed against this system to identify shortcomings in content and to determine the direction of restructuring. Liu Qi [4] proposed restructuring course modules on the basis of job competency, upholding the principles of skill as the foundation, distinct TCM characteristics and a practical orientation.

### 4.2 Restructuring into a Modular Course Content System to Achieve Precise Alignment between Posts and Course Content

Guided by typical workplace tasks, the course should be restructured into a four-in-one modular system comprising foundation, core, specialised and extension modules. The foundation module streamlines redundant TCM theory and retains knowledge that posts require, such as meridians and acupoints and medical safety. The core module integrates rehabilitation techniques such as Tuina and moxibustion according to clinical conditions, and trains students in designing comprehensive plans based on real cases. The specialised module provides differentiated practical training for hospitals, communities and health and wellness institutions. The extension module incorporates frontier content such as intelligent rehabilitation and health education, comprehensively improving students' job fit and career competitiveness.

### 4.3 Optimising the Theory–Practice Ratio and Building a Practice-Oriented Teaching Content System

Practical courses facilitate the translation of theory into practice and improve students' hands-on and problem-solving abilities [5]. With the goal of cultivating skilled talent in view, the ratio of theoretical to practical hours should be adjusted to 3:7, strengthening the leading role of practice. Theoretical lecturing should be streamlined and integrated theory–practice teaching adopted, so that students learn by doing and understand through learning. A three-tier system of "basic training—simulated training—clinical practice" should be built: basic training consolidates standardised procedures; simulated training develops plan design, technique application and clinician–patient communication; and clinical practice, delivered through college–enterprise bases, allows students to take part in real service delivery and accumulate experience, thereby effectively resolving the disconnect between theory and practice.

### 4.4 Deepening the Integration of Posts, Courses, Certificates and Competitions and Improving Content Alignment

Course content should be deeply integrated with vocational certificates, skill competitions and occupational standards, so as to make teaching standardised, professional and practice-oriented.

First, the course should align with the assessment points of vocational skill level certificates such as TCM rehabilitation practitioner and health management specialist, refining operating standards so that students can prepare for and obtain certificates alongside their studies. Second, it should benchmark the scoring and operating standards of traditional rehabilitation technology skill competitions, improving practical training content and strengthening precise, standardised operation and plan design, so that competition drives learning. Third, it should incorporate clinical workplace procedures, safety standards and service etiquette to develop the occupational skills and professionalism the industry requires. Huang Jingjing [6] found that reforming the Traditional Rehabilitation Technology course on the basis of posts, courses, competitions and certificates produced outstanding results. Taking the lumbar spondylosis module as an example, students performed well in skills, overall professionalism and competition outcomes.

### 4.5 Optimising a Diversified Assessment System to Drive Improvements in Course Quality and Effectiveness

A diversified course assessment system centred on job competency should be built, abandoning the traditional single-mode examination and assessing students' job competency comprehensively across theoretical foundations, practical skills, case management, communication and service, and professional conduct. Formative and summative assessment should be combined: formative assessment tracks learning outcomes through routine practical training and case analysis, while summative assessment replaces written examinations with practical work on real cases and plan design. At the same time, assessment should be multi-source, involving enterprise mentors, teachers and peers, and simulated patients, so as to provide precise feedback on teaching problems and drive continuous improvement of the course and of teaching. Jia Jianchang [7] proposed integrating formative and summative assessment, relying on multi-dimensional process monitoring and building a course item bank of no fewer than ten sets of questions benchmarked against certification standards.

## 5. Safeguards for Implementing Course Content Optimisation

### 5.1 Strengthening College-Enterprise Collaboration to Consolidate Teaching Resources

Industry-education integration and college-enterprise cooperation should be deepened. Long-term partnerships should be established with local rehabilitation hospitals, health and wellness institutions and TCM clinics to co-build teaching teams, practical training bases and case libraries. Industry specialists and clinicians should be invited to take part in course development, textbook writing and practical instruction, so that clinical cases and practical experience are turned into teaching resources. On-campus training facilities should be improved, with complete sets of equipment for Tuina, moxibustion and fumigation and simulated clinical settings, to provide the physical infrastructure for delivering the course and practice-oriented teaching. Huang Binyang [8] noted that full-process college-enterprise cooperation can overcome the separation of knowledge and action and promote the integration of theory and practice.

### 5.2 Strengthening the Teaching Team and Improving Teaching Capability

Building a professional teaching team grounded in the new medical sciences is the key support for the high-quality development of practical teaching in traditional rehabilitation technology [9]. A high-quality "dual-qualified" team should be built to provide the human resources for course reform. On the one hand, full-time teachers should be encouraged to take temporary posts in medical institutions and health and wellness enterprises, taking part in clinical diagnosis and treatment so as to update frontier knowledge, strengthen practical skills and connect with job requirements. On the other hand, industry experts and clinical specialists should be appointed as part-time teachers to take part in teaching, practical instruction and course optimisation, offsetting the limited clinical experience of on-campus teachers. At the same time, teaching training and pedagogical seminars should be held regularly to improve teachers' capacity for

course development, instructional design and practice-oriented teaching, in line with the requirements of competency-oriented reform.

### 5.3 Improving Course Resources and Enriching Teaching Carriers

Supported by information platforms, supporting teaching resources should be improved to match the optimised curriculum. In line with the modular content, digital resources such as micro-lectures, practical tutorials, case libraries, question banks and training manuals should be developed, and a blended online and offline platform built to support students' preparation, consolidation and independent practice. At the same time, competency-oriented school-based textbooks should be compiled to replace traditional theory-centred textbooks, taking workplace tasks and practical skills as the core and incorporating clinical cases, operating standards and occupational standards, so as to form distinctive textbooks suited to students and to job requirements and to improve teaching quality and effectiveness.

## 6. Conclusion

The Traditional Rehabilitation Technology course in higher vocational colleges directly affects the quality of talent cultivation, and existing problems—the disconnect between learning and the workplace, outdated content and fragmented skills—constrain educational outcomes. A competency-oriented approach can improve course content by restructuring the curriculum, advancing the integration of posts, courses, certificates and competitions, and improving assessment mechanisms. Course reform requires sustained effort: colleges should deepen industry-education integration, update teaching content dynamically and strengthen students' practical skills and overall professionalism, so as to supply high-quality skilled talent to the rehabilitation industry.

## About the Author

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