Practical Research on Academic Affairs Management Promoting the Integration of Craftsmanship Spirit into Professional Courses

Haifeng Tian, Guang Xu, Xin Qiao*

Inner Mongolia Electromechanical Technician College, Baotou, 014000, China
**Corresponding author: bzpxzx20202@163.com*

Abstract: *Position of craftsmanship spirit is always ambiguous and it's hard to implement in the professional curriculum system. Starting from the institutional function of academic affairs management, studying its mechanisms and ways to promote the integration of craftsmanship spirit into professional courses; clarifying the internal compatibility between the craftsmanship spirit with the knowledge attributes of professional courses, showing the logical necessity of the intervention of academic affairs management; analyzing the collaboration among functional modules, the hierarchy of institutional transmission and the feedback loops of dynamic adjustment at the level of functional architecture, constructing a framework for the integration mechanism. Focusing on the four stages of course design, teaching implementation, evaluation, and reflection, proposing some strategies like goal setting, carrier selection, multidimensional observation, and continuous improvement. Conclusion that through institutional design and process intervention, academic affairs management provides structural support for the curricular implementation of spirit-related objectives, their promoting role depends on the coordination of all modules and dynamic adjustment over the whole process.*

Keywords: *craftsmanship spirit; academic affairs management; professional courses; integration mechanism; operational path*

Introduction

The professional course teaching always emphasizes explicit contents such as knowledge transmission and skills training but there are no conscious designs about attitude tendencies and value judgment embedded in the operational process. The name of the craftsmanship spirit is one of the cultivation goal, however, it only exists at the level of concept advocacy during the curriculum operations while can't be implemented at certain teaching stages and evaluation nodes. Rooted in the reason, besides the difference between individual teacher's ability, there exist structural limitations from the curriculum system—the objective classification framework doesn't have systematic design for non-cognitive dimensions, curriculum standards and teaching norms don't have guidance at the level of operation. Academic affairs management with various functional modules (course scheduling, quality monitoring, teaching supervision, and faculty development) possess the organization condition to fill up the gap through institutional design. Most of the studies focus on interpreting the connotation of the craftsmanship spirit or some specific practices in classroom teaching without considering enough realization mechanism how the academic affairs management system promote integration at the organizational level. We discuss at three levels—integration logic, functional transmission, and operational strategies so as to provide an analytical path which could become a reference for vocational colleges to realize their spirit-cultivation objectives.

1. The Educational Semantics of the Craftsmanship Spirit and Its Integration Logic with Professional Courses

1.1 The Core Essence of the Craftsmanship Spirit and the Extension of Its Connotation in the Context of Vocational Education

Craftsmanship spirit is a concentrated attitude, accurate working habits and constant improvement of product quality shown by practitioners in his/her field at the general semantic level; It originated

with the technical inheritance model during the traditional handicraft era, but was extended semantically beyond the scope of craftsmanship within the modern vocational education system. Craftsmanship spirit is different from the broad concept of professional ethics covered by general professional quality – it stresses the degree of rigor on the operational level, the sense of reverence towards technical norms and the patient faced with repetitive training. The craftsmanship spirit in vocational education doesn't imply a moral preaching detached from professional knowledge but a cognitive disposition and behavior traits woven through the whole process of skill acquisition, affecting their attitudes towards each operational step, each measurement reading and each surface treatment. How do we see this connotation go through an effective transformation from abstract ideas into teaching behaviors (from a cultural-level admiration to specific performance dimensions that are observable, guidable and assessable in curriculum operation) when studying the craftsmanship spirit under the discourse system of vocational education, which also becomes the cognitive prerequisite for the intervention of academic affairs management[1].

1.2 An Analysis of the Knowledge Attributes of Professional Courses and the Embedded Compatibility of the Craftsmanship Spirit

Discipline knowledge system and technical operation norms are the two pillars of professional courses whose knowledge attributes include not only principled cognition but also procedural operation: Principled cognition means understanding the underlying logic of mechanical operating principles, material property parameters and technological processes; Procedural operation focuses on step sequences, rational tool selection and control of machining precision. Craftsmanship spirit exactly reflects an exacting attitude towards details, sensitive to deviations and responsible attitude toward completion quality when doing procedural operations – have a structural correspondence from the perspective of cognitions. In addition, the teaching process of professional courses involves many repetitions such as repeatedly adjusting turning feed rate, point by point checking circuit soldering joint, which naturally provides the behavior manifestation of the craftsmanship spirit. But the knowledge transmission of professional courses has always been oriented to explain clear principles and demonstrate skills, rather than deliberately instructing about the attitude tendencies and value judgment implicit in the operational processes. Thus, although it has a theoretical basis for embedding the craftsmanship spirit, there is no systematic implementation channel. And this gap is the logical starting point where academic affairs management intervenes at the institutional level.

1.3 The Positioning Dilemma and Manifestations of Spirit-Cultivation Objectives in the Curriculum System

There are generally two aspects of goals in the curriculum system: knowledge dimension and skill dimension with relatively mature teaching methods and evaluation tools supporting them; while the spirit-cultivation objectives lies in a awkward interstitial space — they can't be tested by paper-and-pencil test (knowledge objectives), nor quantified by operational examination (skill objectives). Spirit-related objectives included in the current compilation norms of curriculum standards are always vague, e.g., cultivate students' rigorous work style, establish their quality awareness, develop an attitude of striving for excellence without any tiered behavioral indicator and corresponding teaching activities. Teachers will regard it as an incidental teaching task due to the lack of operable teaching guidance and referable evaluation standards, paying little attention when allocating class hours and energy. Such dilemma does not arise from the cognitive bias of individual teachers, but comes from the structure of the curriculum system—the objectives classification framework lacks systematic design for non-cognitive dimension cultivation objectives, resulting that the craftsman's spirit is suspended objectively, detached in processes, and vacant in evaluations at the practical level of curriculum operation.

1.4 The Necessity and Entry Points of Academic Affairs Management Intervention in the Construction of the Spiritual Dimension of Courses

With its functional modules (course scheduling, teaching supervision, quality monitoring, and faculty training), academic affairs management regulates every aspect of professional course operations so it holds the organization condition driving the transformation of the craftsmanship spirit from a suspended object to actual teaching stages: Course scheduling adjusts the ratio between theoretical instruction vs practical training leaving sufficient operating time for teaching contents requiring

repeated refinement; Teaching supervision via in-class observations and teaching inspections records and gives feedback on whether or not teachers pay attention to operational norms and quality details when instructing students; Quality monitoring embeds the observation indicators of the spiritual dimension into stages like lesson plan inspection, random checking of student assignments, final exam review. Most importantly, academic affairs management has the legitimacy of the craftsmanship spirit within professional courses at an institutional level by revision of curriculum standard templates, improvement of instructional design norms, adjustment of teaching evaluation systems. Instead of advocacy, we need to focus on certain nodes such as format requirements of objective statements in curriculum standards, design columns of the spiritual dimension in lesson plans, configuration of attitude indicators in classroom observation scales, weight allocation of process-based evaluation in assessment plans, implementing the promoting role of academic affairs management in integrating the craftsmanship spirit into courses at an executable and verifiable institutional operational level[2].

2. The Functional Architecture and Transmission Mechanism of the Academic Affairs Management System in Promoting Course Integration

2.1 An Analysis of the Supporting Relationships of the Various Functional Modules of Academic Affairs Management with Respect to Course Integration

Generally speaking, there are various modules (course scheduling, teaching operation scheduling, quality monitoring, teaching supervision, faculty development) under an academic affairs management system which do their own duty normally when facing the cross-functional proposition of incorporating the craftsmanship spirit into professional courses but connecting with one another not independent. The course scheduling module coordinates the semester calendar, class hour allocation and practical training venue arrangement to give preferential allocation of time resource for those who need long-term continuous operation so as to avoid fragmented class hours weaken the teaching effectiveness of repeated practice and fine adjustment. Quality monitoring module relies on routine teaching inspection and classroom observation record to incorporate the extent that teachers emphasize operational norm and quality standards into the scope of routine observation, get process data without extra management burden. Teaching supervision module uses feedback interview after classroom observation to help teachers know if their expression in spiritual guidance is clear, whether their demonstration movement is standard or their error correction guidance is precise. Faculty development module uses special seminar and teaching observation platform to help teachers master specific ways to transform craftsmanship spirit element into instructional design. Each module has its clear function boundary yet overlapping and reinforcing each other's supporting role, form a horizontal support network covering the whole process of course operation[3].

2.2 The Institutional Transmission Path and Hierarchical Progression Relationship of the Integration Process

The promotion of academics affairs management integrating the craftsmanship spirit into courses does not project themselves onto classroom teaching but complete the transmission and transformation of institutional will from three aspects: school's teaching management system, departmental implementation rules, and teaching and research section implementation plans. From the perspective of school-level teaching management systems, by using course construction management measures and general provisions for teaching norms as carriers, embedding the craftsmanship spirit as an element of the cultivation goals of professional courses, proposing principled implementation requirements; according to school regulations, considering the features of industries within professional clusters and curriculum structure, developing specific implementation rules clarifying which core courses need to emphasize for implementation and what objective items are needed to add to curriculum standards. The teaching and research section, as a grassroots teaching organization, decomposes the departmental plan into the semester teaching plans showing how teachers should embed content of the spiritual dimension in lesson plan development and assessment plans. Every level keeps its original orientation with added context adaptability to institutional requirements. Tightly connected their connections decide if integration measures can be implemented or just hang on the document level.

2.3 The Embedding Methods of Integration Elements in Course Quality Standards and Teaching Norms

As regards the course quality standards (such as positioning of courses, objective system, principle of choosing and arranging teaching contents, assessment and evaluation requirements), they are the essential elements of the craftsmanship spirit need to find corresponding embedding entry points in them respectively. For example: the degree of operational precision, the requirement of cultivating awareness of error analysis, forming the ability to self-evaluate the quality of finished products can be listed as specified behavioral objectives in the objective system instead of making general statement about quality. As regarding the principle for choosing and arranging teaching contents, we have to emphasize the importance of practical training projects including precision machining stages with multiple trial-and-error corrections so that course content will have its own intrinsic characteristics of eliciting the craftsmanship spirit. The teaching norms limit teacher's behavior during teaching process. We have to add a design column for the spiritual dimension while designing lesson plans, where instructors indicate what spiritual behavioral manifestation he wants to cultivate at each teaching unit and his corresponding arrangement of teaching activities; when doing classroom teaching, there should be minimum specifications for how often and ways of giving feedback on students' operational errors. Essence of embedding methods is converting abstract requirements into reviewable and verifiable specific items rather than being just principled advocacy[4].

2.4 The Dynamic Adjustment Characteristics and Feedback Loops of Academic Affairs Management in Promoting Integration

Integrating the craftsmanship spirit into courses will inevitably lead to some deviation or difficulty in the real teaching environment, therefore it needs that the promotion method chosen by academic affairs management has the feature of dynamic adjustment. Dynamic adjustment relies upon the feedback collection channels set up by the academic affairs management system during the entire teaching operation—the beginning-of-term teaching preparation inspection gets the judgment of teachers about the feasibility of the integration plan; mid-term teaching progress evaluation and in-class observation record reflects the actual situation and difficulties of the integration measure; end-of-term teaching effectiveness summary and student grade analysis indirectly indicates the results of integration. Feedback information at every time node are collected and categorized via the quality monitoring module as the basis of judging the general state of the integration process. Based on such an assessment, the academic affairs management department will adjust accordingly the compactness of course scheduling, the pace of consumable supply, the focus of supervisory classroom observations and the theme of faculty training. A bottom-up suggestion channel allows teachers to send upwards their identification of institutional deficiency and improvement ideas found in classroom practice so that the basis of adjustment can be close to the teaching reality and make the integration process having the operating characteristic of continuously optimizing.

3. The Operational Path and Implementation Strategies of Academic Affairs Management in Promoting Integration

3.1 Strategies for Goal Setting and Content Reorganization of the Spiritual Dimension in the Course Design Stage

Course design stage: Transforming the craftsmanship spirit from concept to teaching behavior. We should encourage supplementary revision on the current teaching objectives of professional courses by academic affairs management. Decompose the craftsmanship spirit into different aspects (maintaining operational precision; sensitivity to errors with active correction; habit of self-acceptance of quality; tendency towards continuous improvement), each aspect has a corresponding level of performance (three progressive steps from completing operations as required to actively identifying deviations, proposing optimization plans etc.), making the spiritual objectives be hierarchically distinguishable and behaviorally observable. Encourage teachers to select task modules included requirements of fine adjustment, multiple corrections and quality comparison in existing practical training project on content reorganization side, shift their positions from the end of the teaching sequence to the core position, designing teaching stages according to such module which requires repeated operation, recording data and comparing tolerances, make course content's own logic bear the cultivation requirement of the craftsmanship spirit. Like adding design column for spiritual objectives in curriculum standard revision

template or check the degree of object refinement when reviewing lesson plan, academic affairs management solidify the above strategies into routine requirements at course design stage[5].

3.2 Selection of Integration Carriers and Key Points of Process Management in the Teaching Implementation Stage

Specific operations in teaching implementation: such as instruction pacing, types of classroom interaction, methods of guiding practical training. The different integration carriers determine if the craftsmanship spirit can present substantially at the teaching site. Timed precision training task requires students to successively approximate machining precision within a specified time; Quality self inspection checklist guide students to check operation result one by one with preset standards; Rework analysis and correction records require students to trace error source and write explanation about improvement measures. These carriers make the abstract requirement of the craftsmanship spirit become students' concrete behaviors, thus making it possible for students to naturally receive training at the spiritual level when they do tasks. Process management means tracking whether teachers implement teaching stages of the spiritual dimension according to the design plan. By adding observation items (how often teachers correct students' operational errors, how standardized and complete their demonstration movement is, etc.) we can get process data on implementation status via supervisory classroom observation record form, which can serve as a reference basis for further teaching guidance.

3.3 Multidimensional Observation of Integration Effectiveness and the Basis for Judgment in the Teaching Evaluation Stage

The cultivation effect of the craftsmanship spirit cannot be measured by traditional paper-based tests or single operation test, so it needs academic affairs management to adjust the evaluation system in terms of evaluation subjects, observation dimensions, and evaluation cycles. Firstly, regarding evaluation subjects, we need to build an evaluation method combining student self-assessment, peer assessment, and teacher assessment: Self-assessment emphasizes the ability of students to assess themselves; Peer assessment emphasizes the sensitivity of students to identify other people's compliance with operational norms; Teacher assessment emphasizes professional judgments about students' overall performance. Second, regarding observation dimensions, design a scoring rubric according to the degree of complete adherence to operational procedures, stability of dimensional tolerance control, how they respond when errors occurred, and the quality level of final finished products, put the spiritual performance at a scorable behavioral level rather than general impression-based judgment level. Lastly, regarding evaluation cycles, break up one-time summative evaluation into multiple staged evaluations, use changes of the same student's score at different time nodes to show the longitudinal development trajectory of their spiritual traits, use longitudinal changes combined with horizontal references to determine the actual effectiveness of integration[6].

3.4 The Guaranteeing Role of Teaching Reflection and Continuous Improvement Mechanisms in the Depth of Integration

The teaching reflection is a bridge connecting the fragmented experience gained by the process of teaching the craftsmanship spirit with systematized teaching cognition. It is necessary that academic affairs management makes it institutionalize the reflective behavior from individual consciousness to work process: Require instructors submitting their teaching logs on every stage of the semester to specifically list the implementation of spiritual dimension teaching, encounter problems, and adjust plan to adopt; Organize teachers of the same major or course group to hold special seminar about craftsmanship spirit teaching, so as to find out some teaching blind spots which individuals can't easily realize through collective reflection; Require teachers to submit improvement plans at the end of the semester to specify the specific direction of adjusting spiritual integration measures in the next round of teaching. Collect regularly the reflection record and improvement plan of each course, extract the general strategy applicable across courses, and disseminate via intra-school teaching exchange, turn the teaching experience of individual level to knowledge accumulation of organization level, thus provide continuous guarantee mechanism for the depth of integrating the craftsmanship spirit into professional courses.

Conclusion

According to the connotation of the craftsmanship spirit in vocational education, analyzing its structure compatibility with the knowledge attributes of professional courses reveals the suspended dilemma of the spirit cultivation goals in the current curriculum system (logical starting point) of intervention by academic affairs management. Mechanism level: Academic affairs management system works together with various functional modules and institutional transmission at the school, department and teaching and research section levels combining the requirement of integration into course quality standards to constitute a dynamic adjustment loop based on feedback from every stage of teaching operations. Operational level: Course design achieves the behavior decomposition of spiritual objectives; Teaching implementation using specific carrier to achieve behavioral transformation of abstract requirements; Teaching evaluation setting up multiple dimensions of judgment criteria; Teaching reflection and continuous improvement promote the conversion of individual experience to organizational knowledge accumulation. Promoting effect of academic affairs management relies upon the overall design of the functional architecture, close connection between the transmission levels, and feedback adjustment throughout the whole operation process. We can focus our study on the differentiation needs of different majors about the connotation of the craftsmanship spirit and developing quantitative measurement tools for integration effectiveness.

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