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Research on the Talent Supply-Demand Adaptation Mechanism and Its Implementation Paths from the Perspective of High-Quality Employment

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Abstract: High-quality employment imposes higher requirements on the quality of talent cultivation, industrial development and human resource allocation. The degree of matching between talent supply and job demand is one of the factors determining employment quality. From the perspective of high-quality employment, this paper analyzes the practical dilemmas and operational logic of the talent supply-demand adaptation mechanism, and identifies major problems in the matching process between talent cultivation and industrial demand. Such problems include outdated training objectives, barriers to discipline adjustment, poor information flow between supply and demand, and inadequate multi-stakeholder linkages. To address these problems, this paper proposes corresponding practical approaches from both the education supply side and market demand side: dynamically adjusting the talent cultivation system in alignment with industrial demand, constructing a platform for information sharing and exchange, deepening multi-party collaborative education, and optimizing the employment monitoring and early-warning mechanism. These measures aim to improve the quality of talent cultivation and facilitate high-quality employment for college graduates.

Keywords: High-quality employment; Talent supply and demand; Adaptation mechanism; Talent cultivation

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1. Introduction

Against the background of building a powerful country in education, high-quality employment for college graduates has become a key issue for the coordinated advancement of educational reform and socioeconomic development. The *Outline for Building a Powerful Country in Education (2024-2035)* clearly states that it is necessary to improve the mechanism for adapting talent cultivation to the needs of socioeconomic development, make forecasts on talent demands, dynamically adjust specialties, and monitor the employment quality of graduates. At present, industrial-structure upgrading and changes in the employment market have

raised higher requirements for the quality and structure of talent cultivation. Exploring the talent supply-demand adaptation mechanism and its implementation path from the perspective of high-quality employment is of great significance for promoting the effective docking of the education chain, talent chain and industrial chain.

2. Research significance of the talent supply-demand adaptation mechanism

The talent supply-demand adaptation mechanism is based on the practical demands of socioeconomic development. It coordinates talent cultivation in universities, talent output and industrial employment demands, and relies on demand prediction, iteration of training programs, feedback of employment information and multi-party collaborative governance to realize the dynamic coupling between the talent-supply side and the job-demand side. Talent supply is reflected not only in the growth of the total number of graduates, but also in comprehensive elements such as individuals' knowledge systems, professional skills and professional qualities. Employers' demands are not limited to the number of posts; they continuously adjust post types and update competency standards for talent as industries evolve. Exploring the adaptation and operation process of talent supply and demand helps identify structural contradictions between talent cultivation and employment demands, and clarify the functional positioning of multiple subjects such as universities, employers and employment-service institutions in the allocation of human resources. Existing studies have carried out multi-dimensional discussions on the relationship between talent supply and demand, and relevant achievements have clarified the basic logic of talent supply and industrial post-demand, yet limitations remain in research perspectives.

Going beyond the growth of employment scale, high-quality employment encompasses multiple dimensions, including sufficient employment opportunities, a fair employment environment, an optimized employment structure, efficient job-talent matching, harmonious labor relations, stable jobs, reasonable salary levels and sound social security. Analyzing the talent supply-demand relationship from the perspective of high-quality employment can further reveal the internal correlation between the talent-cultivation system and the operation of the employment market, and build a new analytical framework for identifying the factors that shape employment quality.

On this basis, sorting out connection paths for links such as intercommunication of supply-demand information, dynamic adjustment of cultivation, and feedback of employment effects can provide practical guidance for universities to improve talent-cultivation programs and employment-guidance services, as well as for employers to optimize talent-selection mechanisms [1].

3. Practical dilemmas in the operation of the talent supply-demand adaptation mechanism from the perspective of high-quality employment

The effective operation of the talent supply-demand adaptation mechanism depends on the interaction of four links: demand identification, cultivation adjustment, information transmission and collaborative governance. At present, practical dilemmas exist in these links, restricting the operation of the talent supply-demand adaptation mechanism.

3.1. Lagging alignment of talent-cultivation objectives with industrial demands, making it difficult to meet development requirements for high-quality employment

High-quality employment requires a shift from quantity matching to structural adaptation, whose premise is that the cultivation side can accurately identify structural changes in industrial demands. However, the talent-cultivation objectives of some universities still fall short of industrial development. Specialty settings and training programs mostly follow the original school-running modes, and responses to changes in regional industrial structures and demands for emerging occupations are slow, making it difficult to meet the new standards for comprehensive literacy and post-adaptability put forward by high-quality employment. Some colleges and universities show convergence in school-running positioning, specialty settings and talent-cultivation specifications, and pay insufficient attention to the industrial characteristics of their local regions, resulting in a homogeneous supply of trained talent. Enterprises have differentiated demands for talent's knowledge structures, practical capabilities and professional orientations, which gives rise to structural mismatch between supply specifications and post demands and hinders the implementation of high-quality employment. Industrial upgrading keeps changing post types and competency requirements, while adjustments in education and teaching involve many aspects, including training programs, teaching staff, and curriculum systems. The periodic nature of talent cultivation also makes it difficult for short-term adjustments to keep pace with the changing demands of industrial posts oriented toward high-quality employment, thereby increasing the difficulty of supply-demand matching [2].

3.2. Barriers to dynamic adjustment of disciplines and specialties restricting the optimization of supply-demand structure for high-quality employment

The adjustment of disciplines and specialties features a strong institutional nature and involves interests in many aspects such as faculty allocation, teaching resources, enrollment plans, and university development. Once a specialty has a strong foundation, the cost of adjusting it is much higher than that of establishing a new one. This discourages optimizing the talent-supply structure through program adjustment to support the development of high-quality employment. In the dynamic adjustment of specialties, some universities face the situation of "easy to add but hard to withdraw". For traditional specialties with continuously declining demand, affected by faculty resources, resource input, and school-running inertia, the abolition or transformation of specialties often takes a long time. Consequently, educational resources are invested long term in fields with shrinking employment demands, which fails to alleviate structural employment contradictions. The establishment of new specialties goes through a series of procedures including demonstration, approval, faculty building and improvement of teaching conditions. Responses to rapidly changing industrial demands are insufficient, and it is hard to rapidly cultivate scarce talent adapted to high-quality employment. Due to institutional inertia, adjustments in talent cultivation show obvious lag, and supply-demand matching can hardly be regulated in a timely manner by market signals, which affects the continuous improvement of employment structure [3].

3.3. Poor two-way communication channels for supply-demand information hindering the efficient allocation of elements for high-quality employment

High-quality employment emphasizes "job-talent matching", whose premise lies in the two-way, continuous and accurate flow of supply-demand information between the cultivation side and the employment side. Nevertheless, disconnection still exists in information transmission between talent cultivation and the

employment market. There is no stable and continuous communication link between employment information mastered by universities and talent-demand information mastered by enterprises. Information barriers will reduce the efficiency of job-talent matching and go against the realization of high-quality employment objectives. Feedback from enterprises on post changes, technological updates and competency requirements cannot be timely fed into links of specialty construction and curriculum adjustment. Information such as college graduates' professional backgrounds, competency characteristics, and employment intentions cannot be effectively transformed into a reference basis for employers to adjust recruitment standards and post settings, making it difficult to realize the precise job-talent matching advocated by high-quality employment. Meanwhile, existing information sources are relatively fragmented, and various subjects adopt different information-collection standards and update frequencies, leading to lagging and one-sided employment information. Without continuous and effective information exchange between the supply and demand sides, talent cultivation will be planned according to past market demands, and the employment market will witness the coexistence of changing post demands and insufficient talent reserves, which is unfavorable for building the information-support system required by high-quality employment [4].

3.4. Insufficient linkage efficiency of multi-party collaborative education subjects, unable to consolidate the collaborative foundation for high-quality employment

Talent supply-demand adaptation involves numerous subjects, including universities, enterprises, governments, and industrial organizations. Effective cooperation among all subjects in links such as talent cultivation, post-practice, employment services, and demand feedback is required. The effectiveness of collaborative-system construction directly influences the advancement of high-quality employment. However, the interest demands, participation modes and responsibility boundaries of each subject are not completely identical. Collaborative education only stays at individual links such as signing agreements and arranging internships, without forming stable cooperative relations running through the whole process of talent cultivation, so it is hard to improve graduates' employment quality systematically. Enterprises have a low degree of participation in talent cultivation; universities have limited understanding of enterprises' production scenarios and post standards; governments and industrial organizations fail to give full play to their roles in information integration, resource allocation and institutional guarantee. The lack of interest-connection and achievement-sharing modes among subjects results in relative isolation among talent cultivation, post demands and employment services. It is difficult to form educational joint forces for promoting high-quality employment, and the overall effect of supply-demand adaptation is unsatisfactory [5].

4. Implementation paths for the talent supply-demand adaptation mechanism from the perspective of high-quality employment

Targeting the practical dilemmas in the above four links, four implementation paths are correspondingly put forward from both the education-supply side and the market-demand side.

4.1. Align with industrial demands and iterate the talent-cultivation system

Universities shall link specialty construction with regional socioeconomic development, and establish a regular review and adjustment system for talent-cultivation programs to meet competency requirements for compound-post talent required by high-quality employment. Full-time teachers may reorganize curriculum

contents according to competency requirements of professional posts, remove teaching contents with weak relevance to actual professional competencies, strengthen the connections among professional knowledge, practical skills and professional qualities, and consolidate graduates' core-competency foundation for high-quality employment. In the curriculum-implementation process, teaching links oriented toward real-world work tasks shall be appropriately added; industrial-technological changes and professional standards shall be integrated into teaching design. Cultivation requirements shall be continuously adjusted according to students' learning outcomes and graduation destinations so as to improve job-talent matching. For instance, relying on intelligent manufacturing production-line optimization projects, post tasks such as equipment operation, process analysis, and digital management are integrated into classroom teaching to guide students to complete process design and fault judgment, promote the docking of classroom training with post standards, and help graduates obtain stable and highly matched employment opportunities [6]. Deans and specialty directors shall make overall arrangements for curriculum structures, practical teaching and faculty allocation. Specialty construction shall not be limited to partial curriculum adjustments; instead, talent cultivation shall gradually form a complete chain oriented toward career-development requirements.

4.2. Build a sharing platform and smooth the circulation of supply-demand information

Universities shall change the working mode of one-way release of employment information. Digital platforms shall be adopted to integrate information on specialty construction, post demands, graduate employment and enterprise feedback, with unified standards for information collection and updating. Relying on information interconnection, support shall be provided for precise job-talent matching required by high-quality employment [7]. Employment teachers and specialty teachers shall sort out post competencies, recruitment conditions, salary ranges and career-development contents according to respective specialty characteristics. With the help of post-profiling and professional-competency-analysis projects, students shall be organized to dig recruitment information and employment-feedback data, extract key post competencies and align them with curriculum contents. Fragmented information shall be classified, sorted and updated in a timely manner to provide support for teaching adjustment and students' career choices. Universities shall also establish an information-feedback mechanism to transmit graduates' employment status and employer evaluations to specialty-teaching departments in a timely manner, turn employment data from outcome records into grounds for teaching improvement, and boost the transmission speed and utilization value of information among various subjects.

4.3. Unite multiple parties and strengthen the effectiveness of collaborative education

Universities shall define the responsibility boundaries of each participating subject in talent cultivation, establish relatively stable cooperation norms and communication channels to prevent superficial cooperation, and consolidate the educational foundation for high-quality employment through multi-party collaboration. Teachers may integrate professional teaching tasks with practical post requirements, absorb industrial practitioners into curriculum construction and practical guidance, and adjust teaching contents and training modes according to actual post demands. For example, joint-design real-post practical projects together with enterprise technical personnel, allowing students to fully participate in task analysis and result delivery so as to enhance post adaptability. At the university level, systems for task division and resource sharing in the cooperation process shall be established, and continuous incentives and constraints shall be given to all participating parties, so as to transform enterprises' participation from merely providing practical posts to in-

depth participation in the cultivation process. Meanwhile, coordination among internal university departments shall be strengthened to form a working pattern featuring cooperation among specialty construction, employment guidance and practical teaching, and continuously improve graduates' employment structure [8].

4.4. Improve monitoring and early-warning mechanisms to guarantee the operation of the adaptation mechanism

Universities shall incorporate changes in talent demands into the regular management of specialty construction. By continuously collecting data such as post quantity, recruitment requirements, occupational structures and graduates' employment status, universities shall analyze and judge changing trends in talent demands, and resolve structural contradictions affecting high-quality employment in a timely manner through monitoring and early warning. Specialty directors may set monitoring indicators related to specialty development, judge the gap between talent cultivation and post demands through data changes, and establish a regular analysis system [9]. When a specialty faces continuously shrinking demands, major changes in post requirements or declining graduate employment quality, specialty demonstration and adjustment of cultivation programs shall be carried out immediately. Through links of monitoring, analysis, feedback and adjustment, universities can timely adjust enrollment quotas, curriculum contents and cultivation orientations according to demand changes, and reduce the lag in talent-cultivation adjustments. For example, relying on specialty-employment-trend-analysis projects, characteristics of iterative post competencies are sorted out to form employment-trend-research reports, which provide data support for dynamic specialty adjustment and continuously improve graduates' employment stability and post-matching level [10].

5. Conclusion

To sum up, centering on the talent supply-demand adaptation mechanism and its implementation paths under the background of high-quality employment, this paper starts with the relationships among talent cultivation, employment service and industrial demands, analyzes existing problems in the connection of talent supply and demand including lagging cultivation, poor information circulation, insufficient subject collaboration and inflexible adjustment mechanisms, and puts forward corresponding practical strategies from the perspective of interaction between education supply and market demand. By improving curriculum projects, strengthening information sharing, deepening multi-party participation and enhancing dynamic monitoring, the talent-cultivation process can be more closely linked with the requirements of professional posts. Talent supply-demand adaptation is not an adjustment of a single link, but a process jointly influenced by education, industry and employment. In practical operation, it is necessary to continuously improve the connection among all links so as to effectively improve talent-cultivation quality and realize high-quality employment.

Disclosure statement

The author declares no conflict of interest.

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