

# Research on the Path to Improving the Quality of Talent Cultivation in Higher Education Institutions Against the Background of Educational Reform

Ning Lang<sup>1</sup>

<sup>1</sup> Shandong Technology and Business University, Yantai, Shandong 264000, China

## ABSTRACT

The quality and level of talent cultivation are the primary criteria for measuring the level of university education. With the surging tide of scientific and technological progress and industrial change, the development of big data, the Internet, and artificial intelligence has brought profound changes in education concepts, and education positioning. Science and technology, education, and talents are increasingly moving towards an organic whole. In the face of the new education situation, colleges and universities must always adhere to high-quality development as the lifeline of education, closely focus on the goals of education reform and talent evaluation, accurately grasp the basic laws of higher education and the laws of talent growth, improve the teaching mechanism, management mechanism, and talent evaluation mechanism of higher education, deeply promote the integration of science and education, industry and education, and empower innovative development of education.

**Keywords:** Digital age, Educational reform, Talent cultivation.

## 1. INTRODUCTION

Talent cultivation is the fundamental task of higher education, and the quality and level of talent cultivation are also the primary criteria for measuring the level of higher education. Colleges and universities generally place education and teaching quality and talent cultivation in their strategic development position. Especially in the current era, the vigorous development of the new industrial revolution and the new scientific and technological revolution makes science and technology, education, and talent increasingly tend to be an organic whole. Big data and the Internet gradually break the limitations of time and space, and have a profound impact on education patterns, education systems, and education models. Artificial intelligence continues to expand the past cognitive boundaries, bringing profound changes in education concepts, education positioning, and so on. New challenges and opportunities have also brought to talent cultivation and education.

Education is a social activity that cultivates people, a precursor to technological innovation, a tool for individual student development, and an

important force for social progress and change. The effectiveness of education reform is reflected in the standards and quality of talent cultivation, ultimately leading to social development and technological progress. In November 2023, the 42nd session of the UNESCO General Conference adopted the "Recommendation on Education for Peace and Human Rights, International Understanding, Cooperation, Fundamental Freedoms, Global Citizenship, and Sustainable Development", proposing the comprehensive deployment of sustainable development education, highlighting curriculum and teaching reforms, emphasizing the development of individual "social emotions" in the education objectives section, and detailing the specific skills, literacy, attitudes, and values that need to be cultivated, including "analytical and critical thinking", "foresight skills", "respect for diversity", "self-awareness", "a sense of connection and belonging to the common and diverse human race and the Earth", "empowerment, agency, and responsiveness", "decision-making skills", "collaboration skills", "adaptation and creation skills", "skills for peaceful conflict resolution and change", and "media and

information literacy, communication, and digital skills". Therefore, in the context of international education reform and development, education should keep pace with the times, actively seek novelty, change, and adapt. The path of talent cultivation should also meet the requirements of the times, be more diverse, rich, and flexible.

## **2. THE CONNOTATION REQUIREMENTS OF EDUCATION REFORM FOR TALENT CULTIVATION**

### ***2.1 Deepening the Innovation of Education System and Mechanism***

Colleges and universities carry multiple functions such as talent cultivation, scientific research, social services, innovation and creation, and international cooperation and exchange. The development and upgrading of science and technology, as well as the emergence of new industries, formats, and models in society, have put forward higher requirements for education and new demands for talent's knowledge level, knowledge structure, knowledge innovation, and knowledge transformation. In the face of the new education situation, colleges and universities must always adhere to the principle that high-quality development is the lifeline of education. They should closely focus on the goals of education reform and talent evaluation, accurately grasp the basic laws of higher education and the laws of talent growth, firmly establish the central position of talent cultivation, and do a good job in top-level design and systematic planning, and vigorously promote the reform of higher education teaching based on the actual development characteristics and disciplinary advantages of universities. Efforts should be made in curriculum construction, talent cultivation mode reform, first-class curriculum and textbook construction, and refined teaching management to promote thorough changes in educational concepts, systems, systems, evaluations, governance, etc. Emphasis should be placed on student moral education, and moral education should be integrated into various aspects such as professional learning, social practice, internships, and practical training; It is necessary to firmly grasp the inherent relationship and organic combination of education, technology, and talent, and integrate innovation into the disciplinary system, teaching system, textbook system, etc., break down barriers between disciplines and majors,

deepening interdisciplinary integration, and optimize and improve the disciplinary and professional system; it is also necessary to deepen international exchanges and cooperation, actively learn from the experience and practices of world-class universities, and promote innovation in talent training systems and mechanisms in all aspects and factors.

### ***2.2 Keeping Up with the Strategic Needs of the Times***

In today's era, science and technology is the fundamental productive force for the development of human society, and talent is the decisive factor in the development of productive forces. The deep integration of science and technology with education is the fundamental characteristic of current and future education, and the integration of education, technology, and talent is an inevitable trend in historical development. On the one hand, the characteristics and role of talent resources as the primary resource for social development and progress are more obvious. As a key force in cultivating high-quality innovative talents, higher education institutions bear an important mission. In the face of new situations and challenges, there is a must to follow the trend of the times, take reform and innovation as the fundamental driving force for school development, strengthen talent cultivation reform, actively connect with national strategic development, optimize subject and professional settings, optimize the strategic layout of education development, improve the overall level and quality of education, cultivate first-class talents, and produce high-quality results; there is also a must to focus on the forefront and key areas of technology, unlock new areas of development, and take meeting social development and era progress as important standards for measuring the effectiveness of talent cultivation, serving and supporting the integrated development of education, technology, and talent. On the other hand, the quality of talent cultivation is an important indicator for measuring the quality of higher education, and it is also the foundation for colleges and universities to establish themselves. Practice is an important criterion for testing talents, and good education aims to cultivate well-rounded individuals. With the development of new technologies and the tertiary industry, new professions continue to emerge, the connotation of traditional industries and professions continues to expand, and the cycle of knowledge updating and achievement transformation continues to shorten. All of these pose challenges to talent cultivation.

Therefore, talent cultivation should be based on the characteristics of disciplines and professional advantages, benchmarking industry trends, industry standards, vocational skills, etc., and optimizing talent cultivation plans by classification, focus, and level, in order to cultivate well-rounded individuals.

### ***2.3 Comprehensively Promoting the Digitization of Education***

Digital and intelligent development is reshaping China's industrial system and innovation system, and has become a reshaping force that can not be ignored in educational reform. At the same time, digital technology represented by the Internet, big data, cloud computing, artificial intelligence, blockchain, and the metauniverse has brought profound changes in education concepts, education models, education forms, and education governance. In the digital age, information exchange has become more smooth, the time and space of education have become more flexible, and educational resources have become more abundant and diverse. These new features will inevitably bring about the updating and upgrading of educational ideas and concepts, the universal sharing of high-quality resources, the development of multiple resources, the display of multiple scenarios, and the change of traditional educational teaching methods through multiple forms of communication. Promoting education big data to empower educational and teaching reform, opening up new tracks for educational development and shaping new advantages for educational development through digital education, is the trend of the times and the only way for educational reform. Embracing the digital age means fully empowering education through digital technology, promoting efficient and precise educational governance, facilitating changes in educational decision-making and management methods, continuously enriching the supply of high-quality resources, expanding the depth and breadth of the application of deep data technology in student daily affairs management, constructing a more flexible and learner centered education model, reshaping the education system and nurturing system in terms of digital literacy, educational resources, educational environment, teaching methods, teaching evaluation, teacher literacy, learning methods, etc., and comprehensively improving the quality and level of education.

## **3. THE REALISTIC DILEMMA OF IMPROVING THE QUALITY OF TALENT CULTIVATION IN EDUCATION REFORM**

The wave of technological progress and industrial transformation is surging, and the integration of technology empowerment and innovation has made the transformation of higher education unstoppable. However, colleges and universities generally have certain shortcomings in talent cultivation, such as the need to optimize disciplinary and professional settings, improve the quality of talent cultivation, and perfect talent evaluation mechanisms. Balancing social development with the supply of educational and technological talents has become a new challenge.

### ***3.1 Insufficient Interdisciplinary Integration Teaching***

Disciplines and majors are the pillars of higher education and the scientific knowledge system. Currently, human scientific research continues to deepen with the development of technology. Understanding, deepening, and solving many problems require the comprehensive use of knowledge from multiple disciplines. The integration between disciplines is becoming increasingly prominent, and the cross disciplinary integration between different disciplines can often give birth to new disciplinary growth points and new scientific frontiers, and is also most likely to produce major scientific breakthroughs. Looking at the current teaching mode of higher education, the integration of disciplines is relatively lagging behind. On the one hand, the development concept of interdisciplinary disciplines and interdisciplinary research methods are not mature, and the boundaries of curriculum teaching majors are obvious. There is a simple patchwork of interdisciplinary content, and the layout and management system construction of interdisciplinary disciplines are not scientific; On the other hand, disciplinary barriers are difficult to eliminate, and most disciplines such as humanities and social sciences, natural sciences, and social sciences are fighting alone. Especially for some emerging interdisciplinary fields, the support is not strong, and interdisciplinary talent cultivation places higher demands on university teachers and researchers, which to some extent limits the improvement and development of talent cultivation quality.

### ***3.2 Collaborative Education Among Industry, Academia and Research Needing To Be Promoted***

Colleges and universities are the convergence point of education, technology, and talent, as well as the main body of innovation. The connection, communication, and cooperation between universities and society are becoming increasingly close. However, specifically, the supply side of talent cultivation does not match the demand side of actual industries and sectors, and talent cultivation programs lag behind changes in the times and social needs. At the same time, the quality of student employment is not high, and situations such as slow employment, slow employment, and "gap year" are constantly emerging. On the other hand, there are more scientific research achievements in universities than at any previous stage in history. However, scientific research achievements, especially in the forefront industries and emerging fields, lack connection with practical industrial applications, and the efficiency and effectiveness of transforming achievements into direct economic benefits and social development are not high. The increasing scale of university education and enrollment does not necessarily indicate the growth of talent quality and social benefits. Only by establishing a talent training model that is compatible with the development of productive forces and promoting a virtuous cycle of education, technology, and talent can the quality of education be thoroughly improved.

### ***3.3 Insufficient Motivation for Cultivating Innovative Talents***

School is the most important foundation for cultivating innovative talents. Currently, colleges and universities generally have certain limitations in cultivating innovative talents, such as inadequate cultivation of innovative consciousness and ability, and unsmooth growth paths for innovative talents. The understanding of innovation and entrepreneurship education ideology is insufficient. The education and teaching model relies on traditional knowledge transmission, emphasizes theory over practice, neglects students' diverse interests and needs, and lacks enthusiasm and ambition for active and innovative learning, resulting in insufficient volume and low quality of innovative talent cultivation. The characteristics of talent cultivation are not obvious or prominent, and there is insufficient personalized cultivation of

students' personalities, guidance on learning interests, and guidance on scientific research interests. The innovative practice platform is insufficient, and an educational and teaching system for the collaborative cultivation of innovative consciousness, innovative thinking, and innovative ability has not yet been established. Students have limited opportunities for experimentation and practice in core technologies and key areas, which cannot meet the needs of developing innovative abilities and skills.

## **4. THE PATH TO IMPROVING THE QUALITY OF TALENT CULTIVATION AGAINST THE BACKGROUND OF EDUCATION REFORM**

Education is the cornerstone of national and social development, and should be oriented towards the future and society. In the rapidly developing digital age, colleges and universities should bravely shoulder the responsibility of cultivating innovative talents, fully leverage their advantages in teaching staff, disciplines, and platforms, and strive to cultivate first-class talents who lead the times and innovation in the entire process and link of teaching, learning, management, examination, testing, and evaluation of innovative talent cultivation.

### ***4.1 Deepening the Reform of Talent Cultivation Model***

Based on the needs of economic and social development and talent cultivation goals, it is necessary to actively connect with national demands, deepen the connotation of professional development, strengthen the top-level design of talent cultivation, optimize the layout of talent cultivation structure, focus on national strategic needs and professional development connotations, establish and improve quality standards and norms covering the entire process of talent cultivation; it is also necessary to strengthen the implementation of collaborative education responsibilities, widely gather the joint efforts of various departments in the school, and achieve efficient collaboration and joint efforts among education subjects, resources, and platforms; Also, there is a must to establish a sound collaborative education system, meet the diverse development demands of students, and comprehensively promote the reform of education concepts, curriculum systems, management systems, and guarantee mechanisms. Strengthening the

construction of the teaching staff is the core competitiveness of colleges and universities and has a decisive impact on the development of higher education. There is a necessity to continuously improve the comprehensive quality of the teaching staff, perfect the high-quality teacher training system, and strive to cultivate a high-quality professional teacher team with noble ethics and excellent skills, comprehensively enhancing the ability to cultivate talents.

#### ***4.2 Improving the Education and Teaching Management System***

Education reform is a long-term, sustained, and systematic project that requires clear strategic planning, action standards, management systems, and so on. To build a high-quality curriculum cultivation system, curriculum is the core element of talent cultivation, and the quality of curriculum directly determines the quality of talent cultivation. It is necessary to strengthen the overall design of the curriculum system, optimize the proportion structure of public courses, professional basic courses, and professional courses, vigorously promote the construction of physical education, aesthetic education, and labor education curriculum resources, offer cutting-edge courses and interdisciplinary innovative talent courses, combine with the school's professional characteristics, and improve the ability of innovative talents to cultivate independently. Schools should continuously carry out general education on artificial intelligence, design and implement a comprehensive curriculum system, explore the organic integration of artificial intelligence with multiple disciplines such as mathematics, economics, and law, and enhance students' abilities in artificial intelligence application and cross-border capabilities. It is a must to promote digital empowerment, innovate new forms of education and teaching, and utilize online information resources to create a batch of innovative and challenging online and offline integrated course and teaching resource databases; It is also necessary to establish a new data-driven intelligent evaluation mechanism to achieve real-time data collection, multimodal data analysis, and deep level data mining and processing throughout the teaching process, and promote the high-quality development of education and teaching.

#### ***4.3 Enhancing and Optimizing Organizational Management Mechanisms***

The efficiency and precision of educational governance will promote changes in educational decision-making and management methods. Collaborative mechanisms should be established and improved. Colleges and universities should adopt a more proactive and effective approach, innovate their development concepts, optimize their organizational and management mechanisms, and create distinctive features, standards, and advantages in academic governance and school management.

There is a must to improve the evaluation mechanism for scientific and technological innovation and transformation, optimize the scientific research evaluation system of schools, focus on the difficulties, pain points, and key points of scientific and technological innovation and achievement transformation, break through the difficulties one by one, and build university campuses into a highland of scientific and technological innovation. There is also a must to deepen the mechanism of open and collaborative education, vigorously promote the deep integration of government, industry, academia, research and application, build a joint construction and linkage mechanism with enterprises, scientific research institutions, governments and other parties, improve the organization level of cooperation, promote interdisciplinary, scientific and educational integration, and industry education integration, promote collaborative education and innovation among industry, academia and research, and strive to promote the modernization of higher education and the high-quality development of local economy and society, empowering and achieving both directions. It is a necessity to improve the mechanism of external cooperation, promote international exchange and cooperation, closely focus on national major strategies and the high-quality development needs of society, actively participate in global competition and cooperation, gather talent resources and innovative elements with international competitiveness, establish an international cooperation and exchange platform, gather high-quality education and talent resources from around the world, provide strong support for the cultivation of artificial intelligence and interdisciplinary talents, and cultivate cutting-edge talents with international vision and global competitiveness.

#### **4.4 Classifying and Promoting Talent Evaluation Reform**

Good evaluation leads to good education, and the evaluation of the comprehensive quality of talents is the "baton" for the growth and success of college students. To promote the reform of talent evaluation, it is a necessity to focus on all elements, enrich the connotation of diversified evaluation, innovate evaluation methods, strengthen top-level design, take student evaluation reform as a key reform task, coordinate and promote relevant education and teaching reform work, adhere to the principle of morality first, ability first, comprehensive development, and five educations simultaneously; it is also a necessity to optimize multiple evaluation criteria, starting from the laws of talent cultivation, strengthen process evaluation, explore value-added evaluation, improve comprehensive evaluation to comprehensively assess and evaluate students' morality, intelligence, physical fitness, aesthetics, and labor skills, emphasize multiple evaluation subjects, establish a more scientific and reasonable evaluation index system, and focus on collecting evaluation elements from multiple perspectives, aspects, and channels. Also, there is a must to focus on the entire process, optimize the educational environment, improve the quality of talent cultivation, highlight the educational nature of student collaborative evaluation, pay attention to both academic quality standards and students' moral cultivation, physical and mental health, labor quality, etc. It is necessary to not only pay attention to students' growth and development changes, but also summarize and reflect on their stage specific growth processes, and timely diagnose educational development problems. There is also a must to focus on all aspects, attach importance to the application of evaluation results, promote the establishment of a long-term mechanism, use big data and other methods to document the comprehensive evaluation of students, and pay attention to the application of evaluation results in various work, serving education and teaching decisions.

#### **5. CONCLUSION**

Reform is the fundamental driving force for the development of education. In response to the new situation and requirements, it is of great significance to consciously place reform in a more prominent position, take the comprehensive development of students as the guide, coordinate and promote the reform of education methods,

school models, management systems, and guarantee mechanisms, further improve the governance capacity of higher education, build a more scientific education management mechanism, a more comprehensive and scientific education teaching model, a more distinctive talent cultivation model, a more sound education evaluation system, and a more abundant and perfect education support system, so as to create a good education development ecology and focus on cultivating high-level compound innovative talents.

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