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Optimization Logic and Paradigm Construction of Digital Transformation of Technical Skill Training Model under the Perspective of Social Media Communication and Intelligent Natural Language Integration

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Abstract: *Research has shown that social media can help students learn. Through a variety of different social platforms, teachers can work with students to integrate social media into their daily instruction to make lessons more interesting and engaging and increase student engagement. With the rise of Metaverse, Artificial Intelligence, Blockchain, New generation communication technology, Brain interface and other intelligent technologies, especially the application of shared media communication and intelligent natural language system, human society has undergone profound changes in production and lifestyle. The digital economy will lead to systematic changes in the concept, mode and governance system of talent training, and the numerical transformation of education training mode, especially the training of technical skills, is imperative. Although some studies try to discuss the construction of intelligent ecology of vocational education, there is a lack of verified scientific theories and practical experience on the implementation path of digital transformation of vocational education. To address this theme, this paper follows the main line of the path of development background, realistic dilemma, hierarchical features, logical framework and paradigm construction of digital transformation of vocational education, and systematically elaborates the great differences between traditional economy and digital economy as the supply base of vocational education development on the basis of full research on the development of digital industry, digital technology and digital education at home and abroad, clarifies the development features including operation mode, strategic direction and value It also focuses on the logical framework of vocational education with industrial chain as the core, innovation chain as the leader, talent chain as the support and education chain as the foundation, analyzes the importance of social communication and natural language intelligent changes in the process of technical skills talents, and explores the practical path of building a vocational education talent training model that is compatible with the intelligent era.*

Keywords: *Digital transformation, Technical skill training model, Social media communication, Intelligent natural language*

1. Introduction

Social media is a new type of media that gives users a great space to participate in online media, with features of participation, openness, communication, dialogue, community, and can mix and match images, videos, texts[1,2,3]. Social media is gradually providing users with a full range of experiences in new ways[4,5]. Natural Language Processing (NLP) appeared in the late 1950s [6]. The advent of the "Turing Test" is envisaged the beginning of the development of natural language processing. In the 21st century, breakthroughs in natural language processing have led to unprecedented improvements in the speech and language capabilities of artificial intelligence systems, and have begun to have a significant economic impact on global progress[7,8]. The competition of core fight among cities within the future is that the race between industrial exhausting power, innovation supply power, talent

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attraction and education support power, the competition of business chain, innovation chain, talent chain and education chain and their synergism level, and also the comparison of technical skills to support industrial development[9,10,11]. Within the twenty first century, with the even trend of digitization and digital manufacture of business, the role of intelligent technology to power economic and social development has become outstanding. Building a replacement intelligent ecology of education isn't solely associate degree inevitable option to cultivate technical talent abilities to address the event and challenges of the digital era, however additionally associate degree inherent demand for the transformation of talent coaching mode and also the deep integration of knowledge technology, digital technology and intelligent technology to reshape the digital talent coaching system, that has become a very important grip for the event of line of work schools and universities at present[12,13]. Digital transformation could be a widely adopted technique to make intelligent ecology in varied industries supported business. As shown in Figure 1, the new generation of digital technologies depicted by 5G, big data, Internet of Things, cloud computing and meta verse can bring about to new models, new industries and new occupations, and can any integrate and develop with ancient industries to accelerate the transformation and upgrading of business structure. Some standardized and programmed positions are going to be replaced by intelligence, the new generated positions can have higher needs for technical skills, versatile production ways can become additional widespread, and also the ancient kinds of production organization can troubled changes can occur.

Figure 1 Digital technology gives birth to digital economy

The study found that the main content of communication between teachers and students through social media was related to learning. The researchers also concluded that teachers should continue to maintain the academic relevance of their communication content by using social networks as a communication tool for scholarly issues, such as addressing issues related to class organization and coursework. Faculty-student interactions in the collective media arena should remain professional. Professors should be mindful of what they cost and what kind of content they wish to share with their students through social platforms, as their online profiles can affect how much students trust them. It is therefore recommended that professors keep their profiles private or create separate public profiles in order to maintain the professionalism of their communication with students. Tang et. al., delineate the testing of a waste product treatment optimisation model for the developing world (described by Ellis and Tang in 1991) in applications to four existing waste product treatment units in Puchong, Malaysia; Shatin, Hong Kong; Min shen, Taiwan; and Pattaya, Thailand)[14]. Veenman et. al., determined whether or not metacognitive state is entirely a part of intelligence as a predictor of learning or not[15]. Shamir et. al., given a symbolic logic based mostly formula that estimates required coordinate transformations during a sensible setting[16]. Associate approach to coaching (Boolean) logic models to high-throughput phospho-proteomics knowledge was recently introduced and solved victimisation optimisation heuristics supported random methods[17]. Videla et. al., demonstrate however this drawback are often solved victimisation Answer Set Programming (ASP), a declarative drawback resolution paradigm, during which a hall is encoded as a logical program specified its answer sets represent solutions to the problem[18]. Li et. al., focus on the transformation and upgrading of the intelligent producing industry[19]. Supported the preceding, Tsyra et. al., analyzed the scope and additional development of the IT-sphere[20]. Coupled with the background of the transformation, upgrading and transformation of the development business, Fei et. al., analyzed the issues existing within the construction of the engineering skilled coaching model, course of study system, teaching

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team and sensible platform supported BIM technology underneath the steering of digital construction, points out the ways that and strategies of multi-disciplinary integration and transformation of ancient engineering majors, and introduces the analysis and sensible results of Kunming University of Science and Technology within the cultivation of BIM technical talents[21]. Since AI-based solutions in CEM have become this analysis focus, it must be comprehensively understood. During this regard, Pan et. al., given scientific review underneath each spectrometric and chemical analysis to gift this state of AI adoption within the context of CEM and discuss its future analysis trends. In-depth interviews were conducted, and grounded theory applied to open committal to writing, main axis committal to writing, and selective committal to writing to make ideas and categories[22-23].

When analyzing social media data from marginalized communities, algorithms lack the ability to accurately interpret the off-line context, which may lead to dangerous assumptions about and implications for marginalized communities[24]. To combat this challenge, Frey et. al., hired formerly gang-involved young people as domain experts for contextualizing social media data in order to build inclusive, community-informed algorithms[25]. In Jordanian radio today, however, media form is a highly relevant discursive resource for broadcasters, who strategically invoke the ways in which different types of media communication are conceived and framed, in a metapragmatic manner that goes beyond the impact of merely technical distinctions between media forms. Frogs, examined two examples of this process: the unification of radio station voices in a memorial programme for a martyred fighter pilot broadcast in February 2015, where radio's limitation to sound was used ideologically to assert national unity; and references to digital media on morning talk show programmes, which allow hosts to define audiences and forms of participation in radio conversations[26]. This process is called influence mining and this novel technique is presented as a method that can be utilized to enable fake news and even propaganda detection[27]. Othlinghaus-Wulhorst et. al., presented a conceptual and technical framework for serious role-playing game for the training of specific social skills in virtual 2D learning environments involving chattels in dialog-centric settings[28]. Despite their widespread use, little research to date has investigated how improving conversational skill of a CA impacts user perceptions of the agent. To elucidate this relationship, Schuetzler et. al., used Social Presence Theory to describe how conversational skill influences perceived social presence and ultimately anthropomorphism of a chat bot[29]. Trappey et. al., used artificial intelligence natural language processing, deep learning techniques and machine learning algorithms to extract the essential knowledge of patent documents within a given domain as a wants to evaluate their worth and technical advantage[30]. Sekarwati et. al., aimed to review the papers that build chat bot applications in various social media using various testing methods[31]. This case study was conducted to confirm that AAC (augmentative and alternative communication) is an effective way in enhancing social communication skill among children with learning disabilities[32]. Bucur et. al., proposed a sentence-level sequence-to-sequence model based on mBART, which frames the problem as a machine translation problem[33,34].

The purpose of this paper is tantamount to gift a brand new model for technical ability coaching in the Perspective of Social Media Communication and Intelligent Natural Language. Most plan is that it's necessary to develop a brand new paradigm for technical skills coaching, which is able to be the principles of improvement logic and paradigms construction. Most goal of this paper is to point out however associate intelligent system will facilitate folks with their learning method and improve their performance all told areas associated with technical skills. Chapter 1 introduces the digital transformation of international education. And the chapter 2 makes a comparative analysis of the characteristics of digital transformation of different types of vocational education. Chapter 3 summarizes and explains the problems faced by the digital transformation of the existing technical and skilled personnel based on time experience. Chapter 4 puts forward the logical framework of the digital transformation of vocational education from the perspective of talent chain, education chain, industry chain and innovation chain. The concluding chapter discusses the paradigm of digital transformation of technical and skilled personnel training mode under the logical framework.

2. Digital economy leads talent development digital transformation

In the context of the digital economy era, the new spherical of commercial revolution can drive profound changes in industrial chains, job clusters and work designs, which need education to require the initiative to dovetail, optimize the skilled layout and introduce coaching modes. By the top of 2021, the size of the world digital economy continues to expand[35], with the worth another of the digital economy increasing from USD 30.2 trillion in 2018 to USD 38.1 trillion, a rise of twenty 6.1%, as shown in Figure 2.

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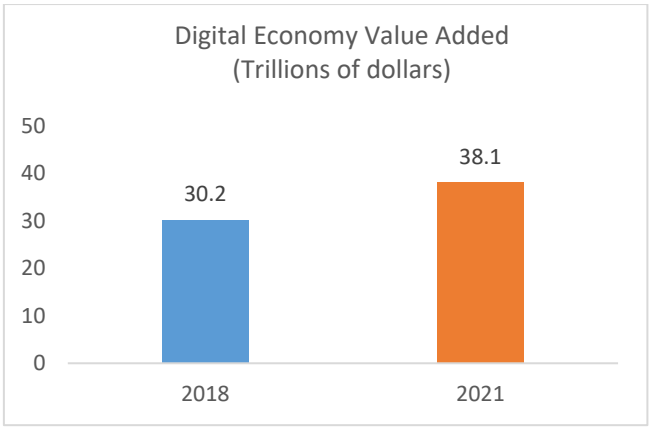

Figure 2 Value added of the global digital economy (2018-2021)

Meanwhile, the digital economy continues to rise within the national economies of nations round the world, and also the share of the digital economy within the gross product of over forty countries counted by the China Academy of data and Communication analysis grew from 40.3% in 2018 to 43.7% in 2021 [36], a rise of 3.4 share points, as shown in Figure 3.

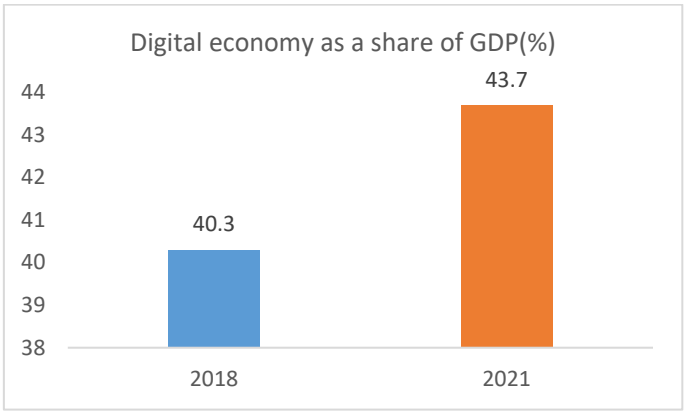

Figure 3 Global digital economy as a share of GDP (2018-2021)

It may be seen that the digital economy has become the most thrust to drag the event of individual countries' industries and promote economic recovery below the continual economic downswing of major countries caused by the world epidemic. Whereas the digital business is leading the method across the board, the digital transformation of ancient industries is additionally fast, defending new need for abilities.

Worldwide, the digital transformation of education is characterised by multi-dimensional, multi-level and multi-geographical development. The United Nations Educational Scientific and Cultural Organization ICT ability Framework for lecturers was 1st revealed, that clearly defines the ability model and organic process levels of teachers' digital skill within the framework of UNESCO's cooperation [37]. In 2020, the EU formally launched the Digital Education Action arrange (2021-2027), that clearly defines the event of high-quality digital education ecosystems building and transformation of digital skills and competencies, among different future ways, and specifically planned actions like developing the ecu Digital Skills Certificate, developing the ecu Digital Education Content Framework, and reconstructing the ecu Digital ability Framework. As shown in Figure 4, the importance of education good scheme building within the development of a large vary of EU countries is obvious from the very fact that the education index is sixth within the ranking of digital index factors revealed by the EU Skills Service Platform for the second quarter of 2021.

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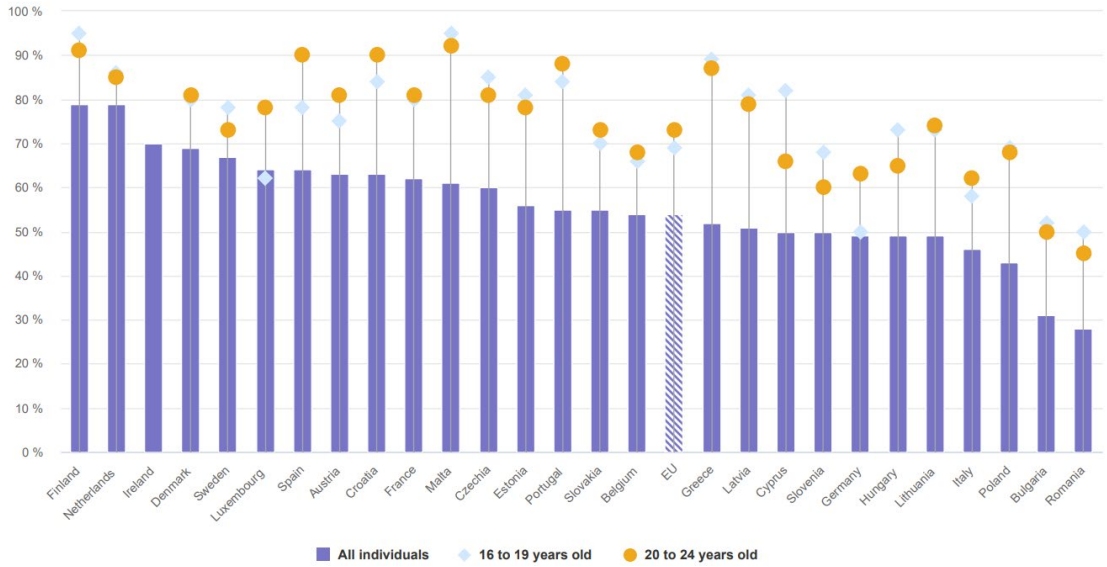

Figure 4 Not a single Member State reaches the EU-level target of at least 80% of 16-74 year reporting basic digital skills

Out of over 7,000 pedagogy establishments in Dutch East Indies, twenty nine establishments are selected and inspired to initiate digital transformation by increasing learning opportunities publically and personal establishments [38].As shown in Figure 5，Germany pays explicit attention to the digital transformation of the talent coaching model, and thru the promulgation of the Strategy for Action on Education for the Digital data Society, digital education is created a key part of the German technical skills qualification, and digital skills coaching, sensible coaching facilities, legal protection, service organizations and teaching establishments outlined as intelligent, international, data-based, standard and service-oriented 5 major action areas [39].

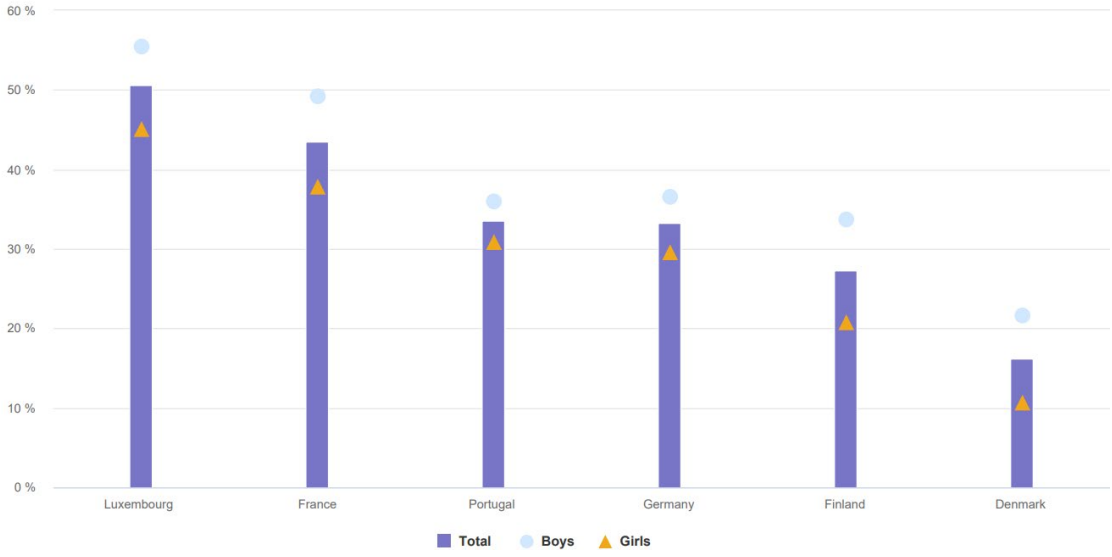

Figure 5 German digital factor index

Within the US, the National instructional Technology arrange was publicized consecutively, and therefore the Reinventing the Role of Technology in pedagogy was introduced, proposing to reshape learning designs and teachers' functions with technology, improve instructional analysis, develop an academic culture of cooperative amendment, and construct a brand new pedagogy scheme, within which Massachusetts Institute of Technology, Stanford University, university, etc. launched in turn the "Massive on-line MOOC", which might get equivalent educational certification through digital distance learning, has started a wave of digital transformation of world info [40-41].

At present, digital technology is also widely used in social science research, and Peking University is promoting the interdisciplinary integration of information technology and social science by setting

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up a digital humanities research platform such as the "Liberal Arts Lab" and the "Digital Intelligence Base for Social Science"[42]. University of Beijing has promoted the interdisciplinary integration of information technology and the social sciences by establishing a digital humanities research platform such as the "Liberal Arts Lab" and "Digital Intelligence Base for Social Sciences"[43]. Zhejiang University has built a research data platform and a shared service platform for research software to provide a "submit-store-share-discover-analyze-excavate" research platform. The research data lifecycle service of Zhejiang University provides "submission-storage -sharing- discovery -analysis-excavation" and "dissemination-crossover" to display data in various disciplines in a multi-dimensional way, promote academic crossover and improve data reutilization [44]; Shanghai Jiao Tong University empowers scientific research innovation with "Jiao-me-calculation" based on the research activities themselves. Based on the characteristics of scientific research activities, the research information technology supports the entire life cycle of research innovation through information technology [45]. Tsinghua University, together with 19 top universities, institutions and platforms around the world, has launched the World Catechism Online Education Platform Alliance, which provides global public courses, shares high-quality educational resources, and shares Chinese perspectives and views; at the same time, Tsinghua University has released the "micro-degree" product, which adopts blended learning, dual certificates, and employment recommendations. At the same time, Tsinghua University released the "micro-degree" product, which realizes the digital transformation of education made by adopting blended learning, dual certification and employment recommendation [46].

3. Characteristics of digital transformation of vocational education at different levels

The visualization path of technical skills personnel training model, on the other hand, is to break through the digital transformation of vocational education, which is difficult to solve the problem of uneven development of skills training by conventional means, and to promote the realization of high-quality development of digital transformation of vocational education and the formation of a new ecology of the future technical skills personnel training system through innovative education models and optimization of education supply [47].

3.1 Development characteristics of different types of vocational education

From the perspective of vocational education, secondary vocational education, higher vocational education, and undergraduate vocational education, as the three main types of vocational education in the current global context, are mainly distinguished by their characteristics in terms of basic environment, teaching and learning implementation, type of orientation, and talent training [48]. As can be seen in Table 1, secondary vocational education and higher vocational education focus on skill operations, processes, and manufacturing processes, while undergraduate vocational education focuses on technical solutions, technical specifications, and process principles for product development as the carrier.

Table 1 Development characteristics of different types of vocational education

Cultivation Type	Base Environment	Teaching implementation	Type Positioning	Talent Development
Secondary Vocational Education	Pan "cultural courses + introductory practical training" small class teaching	Experiential technical skills training room	Basic education schools of the "high school" type	Entry-level skill-based personnel
Higher Vocational Education	Professional teaching of "theory + practical training" based on work process	Integrated Center for Internship and Training	School of Industrial Apprenticeship Education	Mid-level technical and engineering talents
Vocational Undergraduate Education	Teaching for "working principle + product trial" job scenarios	Productive Training Center	Digital Application Engineering Technology University	Field Engineer, Application Technology Engineer

3.2 Digital transformation characteristics of secondary vocational education

Secondary vocational education is a "high school" type of basic education school, with a small class teaching mode of "enriching curriculum + introductory practical training", while most of its teaching

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targets are minors. Graduates are primary skilled talents aiming at further education. The digital transformation of secondary vocational education is mainly through guiding the curriculum teaching to break through the limitation of time and space, and its core elements such as teaching objectives, content, activities, evaluation and environment are re-optimized in the space of physical and network integration [49]. At the stage of secondary vocational education, students can increase the spatial and temporal flexibility of learning with the help of the blended learning method combining online and offline, which greatly expand the online teaching space under the limited teaching space.

3.3 Digital transformation characteristics of higher vocational education

Higher vocational education, as an advanced type of secondary vocational education, is based on work process-based "theory + practical training" teaching through the creation of apprenticeship industrial education colleges, and its teaching facilities are integrated centers for internship and practical training. The digital transformation of higher vocational education is focused on the transformation of the curriculum system of the professions, by breaking through the limitations of the existing vocational education and developing the digital curriculum needed by industries and enterprises [50]. In this educational stage, specialized training programs are developed around the practical needs of specialized skills personnel, and curriculum modules of different schools and specialties are flexibly matched to meet their own development needs. Through the modular curriculum combination, we provide customized and personalized educational contents to students in a process-oriented, model-oriented, and precise supply mode, and link enterprises and schools with "platform resources + services" to train intermediate technical and engineering talents for industries and enterprises.

3.4 Digital transformation characteristics of vocational undergraduate education

Higher vocational education, as an advanced type of secondary vocational education, is based on work process-based "theory + practical training" teaching through the creation of apprenticeship industrial education colleges, and its teaching facilities are integrated centers for internship and practical training. The digital transformation of higher vocational education is focused on the transformation of the curriculum system of the professions, by breaking through the limitations of the existing vocational education and developing the digital curriculum needed by industries and enterprises [50]. In this educational stage, specialized training programs are developed around the practical needs of specialized skills personnel, and curriculum modules of different schools and specialties are flexibly matched to meet their own development needs. Through the modular curriculum combination, we provide customized and personalized educational contents to students in a process-oriented, model-oriented, and precise supply mode, and link enterprises and schools with "platform resources + services" to train intermediate technical and engineering talents for industries and enterprises.

4. The real dilemma faced by the digital transformation of technical skills training model

Facing the development picture of the intelligent era, promoting the digital transformation of technical skills training mode will be a long-term and gradual development process, and is bound to face many realistic dilemmas and problems, as shown in Figure 6.

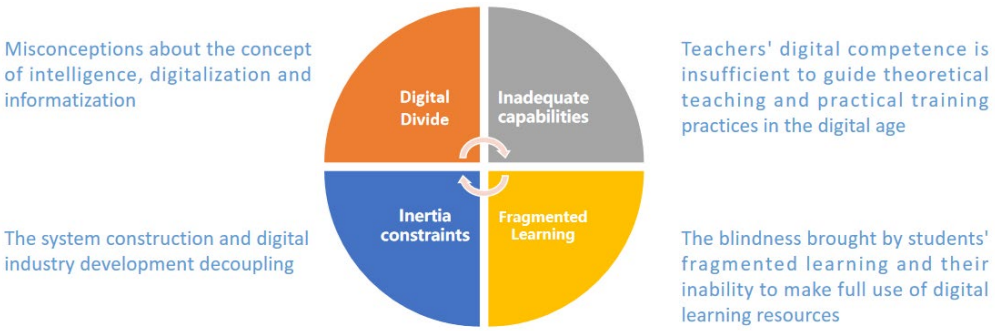

Figure 6 The real-life dilemma faced by the digital transformation of vocational education

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4.1 The digital divide brought about by technological change, misconceptions about the concept of intelligence, digitalization and informatization

At present, the digital transformation of vocational education still has problems such as large but not strong, fast but not excellent, and the digital divide between schools, society, and enterprises needs to be bridged, the biggest problem of which is the misunderstanding of the concept of intelligence, digitalization, and informatization in vocational institutions [54]. At this stage, most of the digital transformation in vocational colleges and universities are either still in the informatization construction stage or digital start-up stage, and there is no clear concept and application practice for informatization, digitalization, and intelligence. On the one hand, they think that digitalization and intelligence are the physical upgrade of informatization, and blindly pursue new technologies and new modes, such as large-scale construction of virtual reality training room, which is not applicable to all majors. On the other hand, it is believed that digital transformation will add a burden to school construction, while adding operational burden to the majority of teachers, and fails to achieve true data-based governance.

4.2 The constraints of the existing inertia of vocational institutions, the system construction and digital industry development decoupling

From the top-level design, the setting of professional education lacks the chain conduction of "industry-talent-education", and there is a structural mismatch between professional setting and discipline construction and the actual demand of digital enterprises, and the phenomenon of "difficulty in employment" of graduates from vocational colleges and digital enterprises coexists. The phenomenon of "difficulty in employment" of graduates from vocational colleges and "difficulty in recruitment" of digital enterprises coexist, which concentrates on the disconnection between education chain and talent chain. In addition, there is a lack of communication and information asymmetry between vocational colleges and digital industry, which leads to high time and economic costs for per-demand matching, resulting in the redevelopment of existing technologies and high trial-and-error costs, and the innovation chain fails to give full play to the role of foresight leading, accelerating transformation and technology empowerment. The pain points and "neck" of the industry have not been relieved. Previously, industry docking mostly took the form of government issuing topics, making guidelines and joint application by universities or scientific research units, but the efficiency was low and it was difficult to precisely match the needs of enterprises. In addition, due to the constraints of the institutional mechanism, it is difficult for young researchers with innovative energy to effectively export their ideas, host projects and implement them on the ground in vocational colleges [55-56]. Finally, the current demand of the digital economy is changing super fast, and under the existing standardized training system of vocational colleges, the sensitivity to market changes also has a lag, which makes the skilled talents cultivated by vocational colleges not necessarily meet the market demand changes rapidly and is not conducive to cultivating a group of shortage of digital practical talents who can be employed upon graduation.

4.3 Teachers' digital competence is insufficient to guide theoretical teaching and practical training practices in the digital age

Most of the core strengths of teachers in existing vocational colleges studied in the early information age, and their advantage is that they have rich theoretical and practical skills, but they lack systematic digital capabilities, and it is difficult to realize the data, visualization and modeling of the curriculum, and the final result is that the "digital transformation" of teaching and practical training is carried out in name, but only in The end result is that the "digital transformation" of teaching and training is carried out in name, but only in the "tool" but not in the "essence". On the other hand, due to the pressure of scientific research and assessment, teachers in vocational colleges and universities carry out digital transformation, such as the integrated circuit industry, because the first-level discipline of integrated circuit science and engineering is a cross-engineering class, it is difficult to publish high-level papers, so it is difficult to carry out scientific research and practical training of IC design and manufacturing in colleges and universities; artificial intelligence industry, there is a serious lack of composite talents who are familiar with technology and good at application, so it is difficult to expand and deepen the application of artificial intelligence. Artificial intelligence teaching application scene; automation discipline involves many engineering problems, covering many fields such as electronics, machinery, control, energy and power, etc., and it is difficult to carry out virtual reality transformation.

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4.4 The blindness brought by students' fragmented learning and their inability to make full use of digital learning resources

Compared with the traditional teaching mode, the digital teaching environment has the characteristics of various learning methods, high degree of information and wide sources of resources, but at the same time, it can also cause the blindness of learners, especially for the majority of vocational college students, who need to face "digital theory" + "digital practical training" at the same time. "The dual learning environment. At the same time, another problem brought by fragmented learning is that the theoretical teaching and practical training courses cannot achieve a unified digital design, which is more dependent on the orientation of the vocational institutions where they are located, resulting in students not being able to make full use of digital resources to improve their technical skills.

5. Integration Optimization Logic of Digital Transformation of Technical Skill Training Model

By promoting the digitization of educational resources, personalization of education and teaching, precision of management services, and intelligence of cultivation methods, the new generation of digital technology has built a new type of technical skill talent cultivation system [57]. As shown in Figure 7, this paper proposes a logical framework for the digital transformation of vocational education oriented to social media communication and intelligent natural language vision, and builds the development direction and logical framework for the digital transformation of vocational education in order to serve the needs of industrial development and target digital talent cultivation.

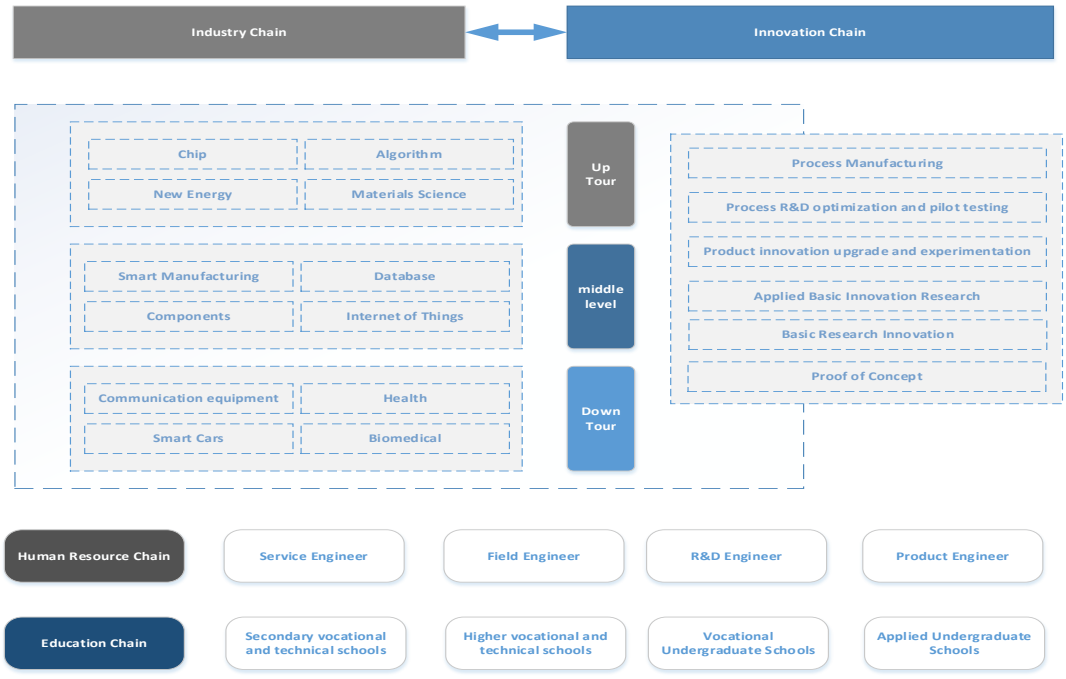

Figure 7 Logical framework of digital transformation of vocational education under the vision of four-chain integration

5.1 Optimize the top-level design of digital transformation of vocational education with education chain as the root

Combining the natural long-cycle nature of education chain and talent chain, and the urgent innovation evolution of innovation chain and industry chain, the government and industry associations, enterprise federations, universities and institutes give full play to their own advantages, set up special working groups, break the barriers of each chain's vested management departments, and form a cross-departmental and cross-field coordination mechanism in terms of working mechanism, policy mechanism, chain conduction and resource support[58,59,60]. Systematically design the top-level architecture of digital transformation of vocational education. At the same time, it accelerates the reform of mechanism and system, comprehensively eliminates the digital construction policy gap

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between vocational colleges and technical colleges from the policy level and implementation level, accelerates the upgrading of high-level vocational technical colleges to digital vocational universities, and at the same time weakens the divergence of interests between schools and enterprises, forms a policy-led and market-operated digital transformation interest linkage mechanism, and accelerates the digital transformation between industry and education, schools and enterprises, and engineering in terms of talents, resources, information, technology, and capital. The two-way flow of talents, resources, information, technology and capital between industry and education, school and enterprises and engineering is accelerated.

5.2 Reconstructing the training program of digital technical skills with the support of talent chain

The vocational colleges and universities in different regions make full use of their advantages in location, industry, talents, market and capital to jointly carry out special research on digital transformation and promote the cultivation of high-end composite digital talents required by the development of local industries. Around the digital discipline professional settings and enterprise job requirements, the implementation of the whole chain of digital training and teaching, to achieve the real "integration" and "cooperation" between industry and education[61]. Referring to the way of setting up disciplines in developed countries of vocational education and combining with the requirements of industrial chain talents, we encourage the opening of cross-disciplines in vocational colleges and universities, and systematically introduce interdisciplinary courses and education systems to vertically cultivate the knowledge structure and technical ability in the field. Promote synergy of regional digital economy industry chain and supply chain, establish a dynamic monitoring mechanism of industry and discipline development, and promote the dynamic adjustment of professional settings with the development of regional digital economy industry cluster.

5.3 Take the innovation chain as the leader and open up the docking channel between technological innovation and industry enterprises

Technological innovation capability is the core feature of vocational education, and it is necessary to deploy digital technology service programs for vocational colleges and universities to connect with enterprises around the innovation chain. Focus on the "neck" key core technology areas, take technological innovation as the core, increase investment as the hand, gather science and innovation resources, cooperate with schools and enterprises to build and share large research institutions and dual-innovation demonstration bases, and orderly promote the selection mechanisms such as open competition, unveiling the list and horse-race system in the comparative advantage technology areas to realize the innovation breakthrough from We will make innovation breakthroughs from "0→1", build original and strategic technological barriers, and accelerate the development of "1→100" integration with application innovation as the accelerator.

5.4 Explore a career-oriented integration service system of industry-education with the industrial chain as the core

In the process of promoting the digital transformation of vocational colleges and cultivating digital talents, leading enterprises play a very important role and need to rely on the industrial chain to collaboratively promote the digitalization of industry-education integration[62]. We should increase the forecast and research of digital talent demand, and build a platform for gathering technical and skilled talents based on big data. Continuously explore and improve the two-way talent exchange mechanism of "vocational colleges-vocational jobs" for digital economy, strengthen the accurate docking between college talent training and industrial talent demand, promote enterprises to strengthen cooperation with colleges and vocational colleges, build a talent training model integrating industry and education, and effectively match the development of national strategic industrial clusters. It also promotes the cooperation between enterprises and universities and vocational colleges, builds a talent cultivation model that integrates industry and education, effectively matches the development needs of national strategic industrial clusters, and creates a systematic, high-end and professional cultivation talent system for future industry and innovation development.

6. Paradigm Construction of Digital Transformation of Technical Skill Training Model

As shown in Figure 8, the digital transformation of vocational education under the integration of

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social media communication and intelligent natural language is not a rich optimization of learning resources, teaching tools and educational methods in general, but a deep change of training concept, training mode and training system to promote the organic combination of "digital skills training" and "digital skills training".

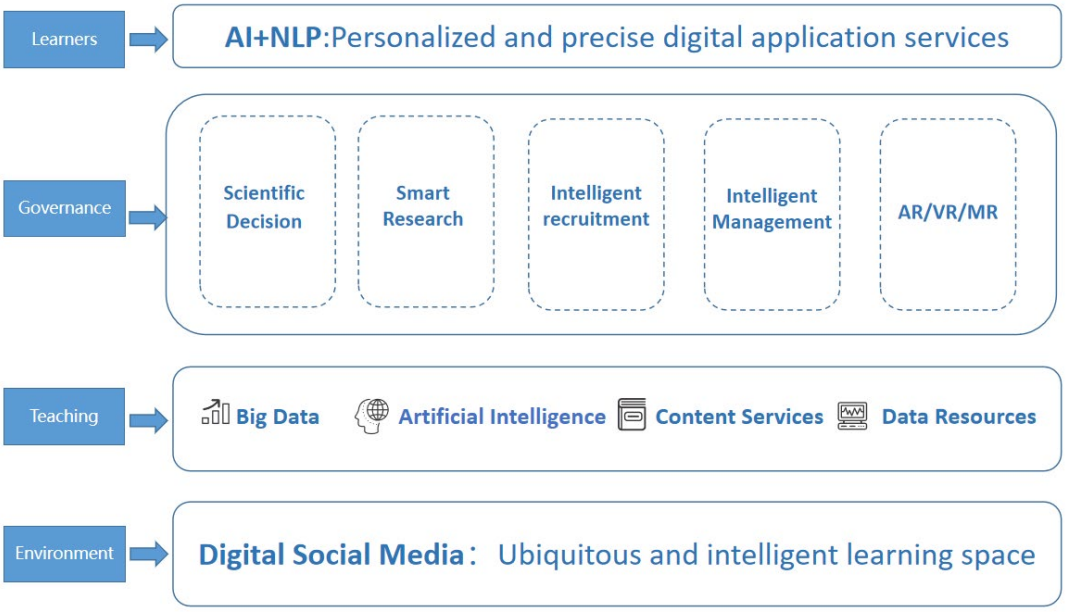

Figure 8 Paradigm Construction of Digital Transformation of Technical Skill Training Model

6.1 In terms of environment, digital social media expand learning space and time and educational boundaries, forming a ubiquitous and intelligent learning space

In the digital era, vocational institutions will provide end-to-end teaching and learning environment. Firstly, it changes from physical space to fusion space. After the digital transformation of teaching, teaching shifts from traditional physical space to the fusion of bodily space and digital space, and support services also need to provide teachers and students with help anytime and anywhere in the fused teaching space. The second is the change from a single point service to the whole process service. Digital skills knowledge teaching breaks through the time limitation of the original classroom teaching, and the teaching support service team needs to provide all-round service to the whole process of teaching before, during and after class. Third, build an intelligent environment to serve the transformation of teaching, complete the digital upgrade of physical teaching environment by adding numerical devices, and realize the input and output of teaching data from physical space to digital space. Fourth is to put in place the application of the new generation of digital technology. The new generation of digital technology represented by artificial intelligence, learning analytics, Internet of Things, social robots, blockchain, etc. will definitely be deeply integrated with higher education teaching.

6.2 In terms of teaching, the intelligent natural language system promotes the organic combination of scale education and personalized training to provide the right education for each student

Social media extends teachers' office hours and facilitates after-class interaction between teachers and students. For students who do not have the opportunity or are too shy to ask their questions in a public classroom, social media provide a platform for them to ask their confusion in relative privacy. Vocational colleges and universities, as operating institutions for technical skills training, need to transform from mechanical systems, personnel capabilities, organizational culture, management systems, and support services to support the digital transformation of teaching and learning. First, develop training programs for the development of the digital economy and adjust the professional training system of schools to the needs of industrial development to adapt to the needs of the digital economy and industrial development. Second, to carry out the construction of cardinal professional teaching resources, to create jobs and professional standards, professional curriculum system, professional teachers, professional practice conditions, management mechanisms, school-enterprise cooperation, teaching and research achievements and professional integration of integrated resources.

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Third, reconstruct the new form of teaching resource library construction, combine professional characteristics and needs to build digital teaching resource library, to meet the needs of online and offline mixed teaching, promote independent, ubiquitous and personalized learning, and realize the integration of production, learning and research of special teaching resources.

6.3 In terms of curriculum, digital technology integrates theoretical knowledge with the integration of professional scenarios to play a role in shaping the value of the digital age

Social media can be an effective way to engaging and communicating with students in a higher education setting. Through this informal form of communication, a different side of the faculty member can be shown and a more harmonious teacher-student relationship can be created with students. Optimize the education and education model, focus on combining theory and practice, and carry out a comprehensive improvement in terms of digital strategy, thinking, execution and innovation. First, build open and skillful learning teams, take project-based course as the carrier, break the traditional test-taking teaching mode, and carry out teaching practice and academic assessment more in the form of teamwork. Second, to offer personalized and precise digital support services, using advanced educational concepts and technical advantages to provide students with diverse, personalized and precise learning support services, the key to the success of digital learning. More and more colleges and universities are using digital means for learning counseling and academic monitoring, student learning support and corresponding early warning and help systems will be more perfect and intelligent, student problems will be corresponding in time, more efficient, and student portraits will be more accurate, which can escort students to complete their studies and achieve personal growth.

6.4 In terms of governance, the HCI platform transforms traditional management into forward-looking regulation and automatic response, effectively enhancing the modernization of education governance

Social media is a valuable tool in colleges and universities to help the faculty and staff community to absorb fresh information, evolve with the times, update their knowledge base, and do a better job of teaching. They can also use Facebook, Twitter, etc. to spread and share news events or other important announcements related to the university. A complete transformation system for cultivating technical skills requires transformation goals and governance systems that are in line with the school's strategic direction. First, the construction of high-quality and inclusive digital teaching as a strategic goal, including the current situation of digital teaching and the specific tasks and progress of the school's external environment affecting the numerical transformation of teaching. Second, set up an organizational structure to meet the transformation need. The digital transformation of teaching and learning requires a corresponding organizational transformation, including both changes in the functions of the original organizational structure of vocational institutions and the addition of certain new organizations specialized in numerical transformation. Third, policies and norms matching the value proposition should be issued. Digital-specific policies need to better consider non-traditional vocational education trajectories and pathways, specify the resources required for teaching digital transformation in policies and norms for the allocation of human, material and financial resources, include digital competencies and their development as important elements in policies and norms for personnel competency development, and add to policies and norms for the assessment of teaching quality The content of digital teaching effectiveness assessment is added to the policies and norms for assessment of teaching quality.

7. Conclusion

Social media will play an increasingly important role in higher education. This is a fast-growing field, so there are numerous potential opportunities to integrate social media platforms and tools into student learning. At present, the century-old changes and the century-old epidemic are intertwined and overlapped, and the global industrial chain system is deeply adjusted, which urgently requires vocational education to take the initiative to adjust and help form new advantages in industrial development. The accelerated return of manufacturing industries from all over the world has brought an unprecedented impact on the layout of the existing global industrial chain system, and the pressure on employment has increased steeply and the challenges are unprecedented. With the support of hundreds of millions of highly qualified workers and technically skilled personnel, a modern industrial system has been built with complete categories and independent integrity, which has become the mainstay to

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cope with the world changes and take part in international competition. In the contemporary situation, to stabilize the economy, hold the bottom line of people's livelihood, cultivate and grow new growth points and growth poles, there is an urgent need to play a vocational education service development, promote employment function. To form new strategic advantages in the new round of international industrial layout, vocational education is even more necessary to enhance its service capacity and play an irreplaceable and fundamental role in the construction of an industrial workforce. In this context, technical skill talents must build core competitiveness to win the future, which requires technical empowerment through intelligence, digitalization and informatization, combined with the leapfrog development of intelligent digital media and intelligent language system. This paper systematically sorts out the systematic relationships among the core elements of governance, students, teachers, curriculum and teaching, and professions in vocational colleges and universities, and proposes a digital transformation of technical skill talents training mode the logical framework is proposed to explore the practical paradigm of high-quality development of digital transformation of vocational education for the smart era.

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