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Secondary Vocational Schools as Pathways to Higher Education in China

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Abstract

Over the past decade, the proportion of graduates from upper secondary vocational schools who have progressed to higher education (HE) has increased significantly in China. This study adopts a multiple case study methodology to provide an in-depth examination of the under-researched role vocational schools play in HE progression. Drawing on interview data, relevant policy documents, and administrative records, our findings reveal that vocational schools have actively promoted the "HE progression" trend. This role serves not only as a strategy for organizational survival—addressing challenges related to resource dependence and the pressure of institutional isomorphism—but also as a means of establishing organizational legitimacy. To improve HE admission rates, the schools in our case studies have implemented similar efficiency mechanisms in response to environmental pressures. These include enhancing the delivery of integrated-education programs with symbolic quality control during the transfer process, adopting classification-based student management systems that differ in form but are similar in substance, and establishing systems characterized by strong "examination-oriented" features.

Keywords

assimilation pressure; China; pathways to higher education; resource dependence; secondary vocational schools



1. Introduction

In recent years, expanding college access for graduates of initial vocational education and training (VET) has received increasing attention from UNESCO and other international bodies (Field & Guez, 2018, p. 7). It has also been a key strategy for many countries to enhance the attractiveness of initial VET (European Centre for the Development of Vocational Training, 2014). In China, the government has gradually promoted structural reform of the VET system by issuing a series of significant policies and regulations, including a substantial expansion of college access for students from upper secondary vocational schools (very few lower secondary vocational schools exist in China; for details, see J. Li et al., 2024). At the same time, vocational schools have taken proactive steps to help students pursue HE.

Current research on vocational students' access to higher education (HE) in China has primarily focused on macro-level policy supply and micro-level educational choices, while meso-level organizational behaviour has been rarely discussed. The macro perspective examines how the government, as a policymaker, shapes HE opportunities and pathways for vocational students through institutional reforms, power distribution, and resource allocation. Relevant literature has mainly used the admission system of higher vocational education as a lens to describe institutional changes and their impact on vocational students' access to HE (e.g., Jiang, 2021; Wu & Yang, 2020; for a literature review, see Dai, 2018), but has seldom investigated how government-led reforms influence the behaviour of vocational schools.

The micro perspective focuses on individual students' aspirations for HE and their outcomes, as well as the factors that influence them. Contrary to a 2007 study that found vocational students were more inclined to seek stable employment (Xu et al., 2007), multiple surveys conducted since 2016 consistently show that these students now generally have strong aspirations for further education (Gao, 2015; J. Li, 2021; Liu, 2022; Shi & Liang, 2018; Tian, 2022; X. Zhu et al., 2017) and a nationwide boom in "HE progression" has emerged (Y. Wang & Hu, 2018; Y. Wang et al., 2019). Large-scale empirical studies have found that students' decisions to pursue HE are influenced by a range of factors, including personal attributes, family background, the quality of career education provided by schools, and their understanding and acceptance of policies related to HE and employment (Z. Li & Yang, 2023). Additionally, research has confirmed that parents of vocational students tend to have high educational expectations (W. Zhang & Liu, 2020; Zhou & Zhang, 2018). However, limited attention has been given to how vocational schools respond to the growing demand for HE from students and their families.

In fact, research on how vocational schools help students progress to HE is not only almost absent in the Chinese context, but it has not received due attention worldwide either. For example, a recent literature review on vocational school education shows that existing research focuses on the school-to-work transition (Fogarty et al., 2024). While the expansion of vocational students' college access in China can be largely attributed to government policy and students' and parents' strong aspirations, vocational schools, as the organizations directly educating these juvenile students, have played a crucial role. China's VET system has been undergoing structural reforms since the beginning of the 21st century—and whether vocational schools have embraced these changes has had a critical impact on their survival and development. For example, if vocational schools do not agree with government reforms, they may fail to implement policies properly or implement them in a flexible manner, thus affecting the effectiveness of policies; or if vocational schools do not pay attention to students' desires, but instead guide students to employment, students' behavior and results will inevitably be



affected. Therefore, truly and fully understanding the transformation of vocational students' HE opportunities cannot be separated from the meso-level perspective.

To address the literature gap in this significant and under-researched area, this study employs a multi-case comparative research method to explore the attitudes and actions of Chinese vocational schools toward students' expectations for HE, and to explain the social dynamics that shape organizational behaviour. Drawing on empirical data and emerging theoretical insights, this article introduces perspectives from organizational sociology—particularly resource dependence theory and new institutionalism—for theoretical dialogue.

Resource dependence theory posits that organizations are primarily concerned with survival and must obtain resources from their environment to sustain themselves and achieve success (Pfeffer & Salancik, 1978). This framework helps explain why vocational schools adjust their structures to adapt to external conditions. New institutionalism theory, on the other hand, emphasizes that organizations operate under "institutional pressures," and that certain decisions and organizational designs may not be entirely "rational" but are shaped by external forces of assimilation. This assimilation enables organizations to gain "legitimacy" and survive within a broader institutional environment (Meyer & Rowan, 1977). Assimilation pressures can be categorized into three types: coercive pressure (e.g., from government policies), mimetic pressure (e.g., from peer institutions), and normative pressure (e.g., from professional associations; see DiMaggio & Powell, 1983). This theoretical lens offers valuable insights into how Chinese vocational schools alter their organizational behaviours and develop strategies to support students' progression to HE under the influence of these various pressures.

2. Policy Background

2.1. National Reforms: Reshape the VET System and Expand College Access

VET has traditionally been a weaker component of the national education system of China. China introduced fundamental reforms in the VET system early in the 21st century, with a vision to improve the recognition of VET as serving regional economic development, industrial system upgrading, and promoting the construction of a strong country in education. The reforms closely related to vocational students' college access are as follows: First, the educational function of vocational schools was required to provide institutional support for HE progression, which shows a political mechanism at play in the change of organizational behavior. As a grassroots organization in the VET system, vocational schools have the triple functions of providing technical skills education, nursing education, and HE preparation (Tian, 2021). Among them, the function of HE preparation was even restricted in the early days. For example, Article 7 of the Notice on the Compilation and Submission of the 2006 Enrollment Plan for General HE by School and Major (Ministry of Education & National Development and Reform Commission, 2006), required that "the scale of secondary VET graduates to be recruited by vocational colleges shall not exceed 5% of the graduates of vocational schools in the province in that year." Even when comprehensively deploying how to build a modern VET system with Chinese characteristics and world-class standards in 2014, the government still stated that "the employment-oriented operation of secondary VET will be adhered," as indicated by article 5 of the fourth part of the Plan for the Construction of a Modern VET System (2014-2020) (Ministry of Education et al., 2014). However, the document Opinions on Promoting the High-Quality Development of Modern Vocational Education,



pointed out that secondary VET should "focus on providing students with a solid technical skills foundation and a qualified cultural foundation for higher VET" (General Office of the CPC Central Committee & General Office of the State Council, 2021, Article 5), which for the first time clarified at the institutional level that the function of vocational schools should shift to a focus on both employment and further education.

Second, an integrated VET system was established (see Figure 1) and helped students progress to undergraduate programs, which became the focus of vocational schools' tutoring strategy. In the past, the highest level of VET was junior college vocational education, which lasted for three years and could only award the Da-Zhuan diploma (just a certificate proving education experience); this means that there is no degree for these graduates. Moreover, the admission and enrollment in vocational colleges were included in the national unified college entrance examination (commonly known as the *Gaokao* system) and admission for HE institutions. This exam-based enrollment was placed after completing the final announcements of undergraduate education in the admission batch, leading to the widespread perception in society that VET belongs to low-level education (Ministry of Education, 2022). This was commonly seen as the next option after a student's unsuccessful enrollment in an undergraduate admission process. Vocational colleges with normally low entry barriers, which also admit academic high school graduates and mature students with work experience, are the main destination for vocational students to further their education. If a student wants to obtain an undergraduate diploma and a bachelor's degree, they need to pass what is known as the "Da-Zhuan-to-undergraduate examination" and enter an undergraduate program to study for two years after entering a vocational college.

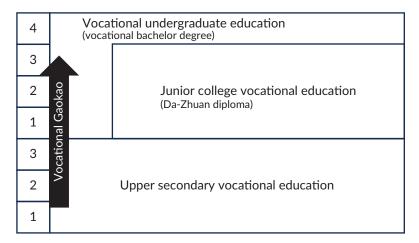


Figure 1. A modern VET system in China.

In order to effectively improve the status of VET, the document *Decision of the State Council on Accelerating the Development of Modern Vocational Education* first proposed "exploring the development of vocational undergraduate education" (State Council, 2014, Article 5). With the release of the *National Vocational Education Reform Implementation Plan* (State Council, 2019, also known as the "20 Articles on Vocational Education"), the Ministry of Education approved the establishment of the first batch of 15 vocational undergraduate universities with a four-year school system, awarding undergraduate diploma and vocational bachelor's degree. In 2024, there were 51 vocational undergraduate universities in China (Ministry of Education, 2024b). The documents *Opinions on Promoting the High-quality Development of Modern Vocational Education* clearly stated that by 2025, "the enrollment scale of vocational undergraduate education shall not be less than 10% of the enrollment scale of higher VET" (General Office of the CPC Central Committee &



General Office of the State Council, 2021, Article 3). Moreover, the Vocational Education Law of the People's Republic of China, revised in 2022, further reserved development space for setting up undergraduate vocational education majors in general universities and vocational colleges in the future (Ministry of Education, 2022). It can be seen that the HE destinations of vocational students have expanded from junior college education programs to various undergraduate education programs.

Third, the reform of a classified college examination and admission system for higher vocational education—tailored to the characteristics of VET—was implemented. This reform opened multiple pathways for vocational students to access HE and led to vocational schools developing differentiated attitudes toward these various channels. Previously, vocational students could only access HE opportunities (primarily in vocational colleges) by taking the *Gaokao*, which is open to all high school graduates and emphasizes academic assessment. Although vocational students are permitted (though not encouraged) to directly enter undergraduate programs with excellent *Gaokao* scores, the exam's subjects, content, and difficulty are not aligned with the secondary VET curriculum.

For instance, the breadth and depth of the core *Gaokao* subjects—Chinese, mathematics, and English—far exceed what is covered in regular vocational school instruction. Additionally, optional *Gaokao* subjects such as physics, biology, chemistry, and history are generally not included in the standard vocational school curriculum (see S. Wang et al., 2024, pp. 170–172). As a result, vocational graduates face significant disadvantages when taking the *Gaokao*.

To align with the characteristics of a VET system, China has gradually separated the college examination and admission systems for higher vocational education from the traditional *Gaokao* system. In 2013, the document *Guiding Opinions on Actively Promoting the Reform of the Examination and Admission System for Higher Vocational Education* (Ministry of Education, 2013, Part 2) proposed six pathways to higher vocational education: (a) admission based on the *Gaokao*; (b) independent admission by vocational colleges, (c) comprehensive evaluation admission by vocational colleges; (d) counterpart admission for secondary vocational school graduates with an emphasis on skills; (e) the "3+2" or five-year integrated education model; (f) and exam-exempt admission for top-skilled talent (see Table 1).

Through diverse provincial reform initiatives, a basic framework of "six modes and twelve types" has gradually taken shape, though not all types apply to every vocational student (J. Chen, 2019). The "20 Articles on Vocational Education" called for the establishment of a "vocational *Gaokao*" system designed to operate in parallel with the traditional *Gaokao* and characterized by a focus on "cultural knowledge + vocational skills." At this stage, the various pathways for vocational students to enter HE have been formally integrated into this independent "vocational *Gaokao*" system.

It is worth noting that, to alleviate employment pressure and address the shortage of highly skilled talent, China launched a large-scale expansion initiative for higher VET in 2019, aiming to increase enrollment by 1 million. This expansion continued through 2020–2021, adding another 2 million enrollments. The initiative targeted recent and past graduates of all types of high schools, as well as non-traditional groups such as veterans, unemployed workers, migrant workers, new-type professional farmers, and employees from various industries.



To achieve this ambitious goal, the government removed quota restrictions on vocational colleges enrolling secondary vocational graduates starting in 2019. This policy shift effectively opened the doors to HE for vocational students (J. Li, 2021). As a result, China's gross enrollment rate in HE exceeded 50% for the first time, marking a transition from the massification to the universalization stage of HE (Trow, 2000).

In 2022, the HE admission rate for secondary vocational graduates nationwide reached 59.21%, with 11 provinces—including Beijing and Shandong—exceeding 70%. Of these admitted students, 63.75% entered through the provincial unified "vocational *Gaokao*," 14.72% through "3+2" and "3+4" integrated-education channels, 14.24% through five-year integrated education, and 7.29% through other pathways (China National Academy of Educational Sciences, 2023, p. 18).

2.2. Shandong's Reforms: Spring Gaokao and Diversified Pathways Into HE

China's VET system operates under a provincially coordinated management framework, with the central government encouraging pilot provinces to independently explore new regional models for VET reform while following the national reform direction. Shandong province in eastern China was the first province to launch a pilot reform of the "vocational Gaokao" system, and the first province to establish the "National VET Innovation and Development Highland" in 2020. Since 2009, Shandong has selected some vocational colleges to pilot independent admission schemes. Starting in 2012, Shandong has introduced the "skills-based Gaokao" test, which is commonly known as the Spring Gaokao because it is held in spring, while the traditional Gaokao is held in summer. Spring Gaokao primarily targets secondary vocational graduates and is characterized by a combination of "knowledge + skills." In 2013, the province began piloting a "3+4" secondary-to-bachelor integrated-education program and improved the post-lower-secondary-education five-year higher vocational education system. Starting from 2018, the Spring Gaokao became the main channel for selecting technical and skilled talents. Designed in 2020, Shandong formally implemented its local version of the "vocational Gaokao" system, which integrated the Spring Gaokao channel and other pathways in 2022 (see Table 1). In 2024, a revised Shandong Province Vocational Education Regulation codified these reform outcomes into law and provided a "Shandong model" for advancing the construction of a modern VET system in China.

Shandong has massively expanded college access for vocational students through the joint effort of continuous policy optimization. There has been an increased enrollment quota for vocational undergraduate programs, as well as vocational schools providing HE tutoring. According to official statistics (Shandong Provincial Department of Education, 2024), in 2023, 239,606 secondary vocational graduates reported post-graduation placements, with 187,216 continuing their education and 21,273 advancing to undergraduate programs (p. 131). In some cities, the proportion of students entering HE was even higher: For example, Qingdao, the provincial capital, reached 86.4% (p. 10).



Table 1. Diversified pathways to HE in Shandong province.

Pathway	HE destination	HE admission basis				
Provincial unified Vocational Spring Gaokao undergraduate education; junior college vocational education		Scores of two parts of the Spring <i>Gaokao</i> : "cultural knowledge" (including Chinese, mathematics, and English); "vocational skills" (including "professional knowledge" and "skills testing")				
Vocational college's independent admission	Junior college vocational education	Admission is based on two tests: (a) a cultural quality test designed by vocational colleges and (b) a professional skills test (previously organized by vocational colleges and replaced by the "skills testing" portion of the Spring <i>Gaokao</i> in 2022).				
Vocational college's comprehensive evaluation admission	Junior college vocational education	Admission is based on scores of the Spring/Summer Gaokao, of scores from the academic proficiency test in a vocational school or general high school, combined with vocational aptitude test results and a reference to comprehensive evaluation information. This route no longer applies to vocational students of 2020.				
Top skilled talent admission with exam-exemption	Vocational undergraduate education; junior college vocational education	Admission is based on significant achievements in professional skills competitions: third prize or higher in the National Vocational Skills Competition, or first prize in the Provincial Vocational Skills Competition. Talents need to take the "cultura knowledge" portion of the Spring Gaokao (the "vocational skills part is exempted), and the HE admission cutoff is very low.				
"3+4" secondary-to- bachelor integrated- education program	Undergraduate program	Admission is based on: (a) "3+4" or "3+2" integrated-educatio programs (after studying in a vocational school for 3 years, students enter a cooperative vocational undergraduate progra or junior college vocational education program to study for two four years); and (b) transfer examination, which consists of				
"3+2" secondary-to- Da-Zhuan integrated- education program	Junior college vocational education	the "cultural knowledge" portion of the Spring <i>Gaokao</i> and professional tests designed by the collaborating undergraduate program ("3+4"), or of cultural quality test and professional skills test set by the collaborating vocational colleges ("3+2").				
Five-year integrated education program	Junior college vocational education	Vocational colleges directly recruit lower secondary school graduates and provide them with five years of full-time education. They do not study in secondary vocational schools				
		and do not have transfer examination.				

3. Research Methodology

This study is dedicated to answering the two questions: Why do vocational schools that used to focus on employment generally shift to emphasizing further education? And how do vocational schools help students progress to HE? Our qualitative research orientation is quite consistent with this study. In qualitative research, researchers go deep into social phenomena and can construct contextualized meaning and interpretations through personal experience (X. Chen, 2000). Through the analysis of typical cases, we can gain an in-depth and detailed understanding of the research questions; conclusions derived from multiple cases rather than a single case are often considered more convincing (Yin, 2011).



3.1. Case Selection

In selecting specific cases, this study primarily follows the principle of key case sampling to enable logical generalization and maximize the applicability of findings to other contexts (Marshall & Rossman, 2010). At the same time, the study considers sample diversity in order to identify important common patterns by comparing differences in the tutoring strategies adopted by vocational schools (Marshall & Rossman, 2010). In addition to research objectives, the sample size in a multi-case comparative study depends on several complex factors, including data accessibility, funding, and time constraints.

Ultimately, three public secondary specialized schools—A, B, and C—were selected. These schools represent the most common type of secondary VET institution in China (J. Li et al., 2024, p. 51) and are located in and directly governed by three different administrative districts of City X in Shandong Province.

In addition to Shandong being a representative province for China's VET reform, the selected schools—accessible to the research team—also share essential characteristics of key cases. Like many areas in Shandong, City X and its administrative districts prioritize alignment with provincial policies and actively promote the implementation of the "vocational *Gaokao*" system. For instance, the implementation plans for VET innovation issued in 2020 by the two districts where Schools A and B are located explicitly emphasized strengthening policy guidance on the "Vocational *Gaokao*" and directed vocational schools to support students in progressing to HE.

As shown in Table 2, the selected schools generally had high HE admission rates but low undergraduate admission rates. An exception occurred in 2022: School B's relatively low HE admission rate was attributed—according to the school—to the impact of the Covid-19 pandemic, during which many students felt unprepared and opted not to take the Spring *Gaokao*. Its higher undergraduate admission rate can be explained by its location in the central urban area of City X, where students typically have stronger academic foundations and some parents may arrange additional ("shadow") education.

Overall, the selection of these three schools provides a strong basis for exploring the organizational role of vocational schools in supporting students' progression to HE. There are still obvious differences in the undergraduate admission rates and the characterization of student management models. Among them, School C has a unique student management model, whose HE and undergraduate admission rates have been among the best for many years. Paying attention to these inter-school differences and their trends can help us better understand the logic of organizational behavior and extract important common patterns from the comparison of diversity. However, it should be noted that this article focuses on the commonality of organizational motivations and behaviors rather than on individuality. In other words, we focus on exploring the collective transformation of vocational schools' education model. Therefore, more differences in detailed dimensions of different vocational schools and the causes are not within the scope of this article.

3.2. Data Collection and Analysis

To comprehensively collect relevant information, we conducted face-to-face semi-structured interviews with 13 organizational members in 2024. Since this study not only attempts to describe the phenomenon of case-study schools helping students enter HE, but also explores the social mechanisms that shape



organizational attitudes and behaviors, purposeful sampling is used as the basic principle when recruiting interviewees. We mainly look for decision makers in the school's bureaucratic management and leaders in charge of specific HE tutoring work. As key experts, they can provide information on practical operations and the design, concept, and driving factors of HE progression policies or reforms. The interviewees were composed of four school leaders (SL), five heads of functional departments (HoFD), including the Academic Affairs Office, the Admission and Employment Office, the School-Enterprise Cooperation Office, and the School Office, and four heads of academic departments (HoAD), referring to the specific teaching units responsible for educating students in various majors. The interviews were conducted following general research ethics, with the informed consent of the respondents and respecting the respondents. Transcribed interview records were labelled according to school, order of interview, identity of interviewee, and interview date. For example, "A1-SL-0612" indicates the first interviewee from School A, who is a vice principal, with the interview conducted on June 12.

We also collected diverse public and internal text materials, including school strategic plans, school education quality annual reports, admissions brochures, HE tutoring work summaries, etc. These documents help understand the actual operation of the case school's HE tutoring strategy, and complement or cross-verify with the interview data to jointly support the formation of research findings.

Thematic analysis, which is good at identifying, analyzing, and interpreting patterns or themes that emerge from the data (Naeem et al., 2023), was employed to scientifically analyze the rich first-hand data obtained. We first took the inductive reasoning path rooted in the data, namely letting the data "speak," integrating and grouping paragraphs of relevant texts, and organizing the topics by integrating repeated views into consistent categories. Since the data show that there are multiple reasons for vocational schools emphasizing further education, and the strategies to help students progress to HE are multi-level, we use the selected theories to analyze and explain the deep structure implied in the data when reintegrating and abstracting the classified themes. In order to ensure the accuracy of the phenomenon interpretation, the members of the research team cross-checked the original data and its interpretation and reached a consensus.

Table 2. HE admission stats of schools from our case studies (2021–2023).

	2021			2022			2023		
	Number of graduates	HE admission rate (%)		Number of HE admiss Graduates rate (%			Number of graduates	HE admission rate (%)	
		Overall	Under- graduate		Overall	Under- graduate		Overall	Under- graduate
Α	637	87.9	7.4	486	93.2	12.6	816	90.8	7.8
В	947	85.2	16.9	1049	67.5	12.4	1263	92.8	15.1
С	1549	96	23.0	1664	97	22.1	1678	99	16.1



4. Research Findings

4.1. Organizational Motivation for Emphasizing Further Learning: "Primarily to Meet Parental Demand"

A large number of vocational schools in China have recognized the importance of the HE preparation function early on, and now this function has become the dominant one. This can be seen from the 2024 admission brochures of the three selected schools. Except for School B, which still has a small number of employment-oriented school-enterprise cooperation enrollment plans (12.0% of the total enrollment), the other two schools only enroll students into the integrated-education programs and Vocational Gaokao programs, both of which emphasize further education. Moreover, the graduation destination of the school-enterprise cooperation program has been described as "flexible choice of entering HE or employment," which also points out the prospect of continuing education. However, the collective adjustment of the educational function of vocational schools does not only come from the compulsory isomorphic pressure of government policies, but is more of an adaptive change that organizations proactively make in order to obtain resources for survival and development when facing environmental changes.

First, the homogeneous demands of the parent group constitute the core driving force that pushes vocational schools to change their educational goal. When asked why schools prioritize further learning, interviewees consistently emphasized that the reason was "primary to meet parental demand." Parents are the main decision makers in the educational choices of their children, whose needs produce external control of the organization. Parents generally have HE expectation due to concerns about their children's personal growth and employment prospects: "Children are still young and not yet mature enough. They should stay in school for a few more years before entering society" (A1-SL-0612); "Employers now have higher educational requirements and rarely hire secondary vocational graduates"(B1-SL-0703). In other words, parents regard further education as a core strategy to avoid "premature socialization risks" and enhance intergenerational mobility opportunities, and their cognition resonates with labor market signals. As investigated by School C in 2023, there are very few professional positions for enterprises to recruit vocational students. Besides, parents often perceive their children's progression to HE—especially to undergraduate programs—as a source of pride and social recognition. As one interviewee remarked, it gives families a sense of "face" (C3-SL-1111), reflecting the cultural emphasis on academic credentials in China (G. Wang, 2024).

Second, the general HE desire of students has strengthened the adjustment of the educational goals of vocational schools. As members of the organization, students' common values and behavior patterns obviously strengthen schools' determination to transform. Under the combined influence of parental expectations, market signals, and personal aspirations, vocational students overwhelmingly gave up on employment. Interviewees from School C indicated that students "already consider further learning to be crucial and don't need guidance from school," and that "many students aspire to pursue higher levels of credentials" (C1-HoFD-0619). Findings from the 2018 Shandong Secondary Vocational Education Survey indicate that 93.67% of students expressed a strong desire for HE, with 69.29% specifically aiming to enter undergraduate programs. Additionally, 86% of respondents cited "personal interest in learning" as their primary motivation for taking the Spring *Gaokao* (Fan, 2020, p. 54).



Third, the potential survival crisis has pushed vocational schools to emphasize HE preparation, especially preparing for undergraduate programs, as a competitive advantage. Secondary VET has long occupied half of China's high school education, but the number of enrollments has been declining since 2010 (Ma & Shi, 2020; Y. Wang et al., 2019). Especially for some schools that are lacking in internship and training equipment and dual-qualified teachers, it is even more difficult to attract students by emphasizing employment. Many district and county vocational schools with average resources have formed an education model with a good undergraduate admission rate as the core competitiveness (Tian, 2022). Moreover, as China has recently accelerated the pace of reform in exploring the integration of secondary vocational and academic education and building comprehensive high schools, the government began to clearly advocate the establishment of "few but higher-quality" vocational schools (Huai, 2024). Under the pressure of survival, how to attract students has become more urgent for vocational schools. The model that emphasizes HE, which not only meets the needs of parents and students but also is praised by the government, is undoubtedly the most effective strategic choice. Due to excellent HE admission rates, schools from our case studies have even attracted students from outside their administrative districts and even from other cities in Shandong.

Finally, the strategic adjustment of focusing on HE has been embedded with multiple legitimacy mechanisms. Although mainly serving the organizations' sustainable development, helping students receive HE is also regarded as a social responsibility that schools should bear. Interviewees pointed out: "This is our job. It is for the good of the children, with a sense of responsibility, and for the reputation of the school" (C2-HoAD-0619); "At least from the perspective of being responsible for students, the 'Spring Gaokao' is a good channel for pursuing HE" (B4-SL-1112). By fulfilling its social responsibilities, the organization has gained recognition and spiritual support from parents and students, improved the school's social reputation, and thus helped consolidate the legitimacy of the organization. At the same time, although there are no clear assessment indicators, financial subsidies or material rewards for the school's HE preparation work, the government "verbally praised at various meetings" (C1-HoFD-0619), or invited the schools to publicize their experiences throughout the city. In other words, this strategic adjustment not only met the demands of families but also met the new direction of secondary VET development advocated by the government. The praise from the governmental authority, in turn, strengthened the organization's determination to change.

4.2. Providing Integrated-Education Programs With Symbolic Quality Control: "No One Has Failed to Meet the Transition Standards"

Developing integrated-education programs for cooperation between vocational schools and HE institutions has been one of the core measures of China's efforts to expand college access for vocational students. Under the governmental authorization, the schools from our case studies have all launched the "3+2" secondary-to-Da-Zhuan integrated-education program at an early stage. For instance, School A began offering this program in 2002. Notably, in 2014, School C pioneered a "3+4" secondary-to-bachelor integrated-education program in the digital media technology application major, which was described as "making your university dream come true." The class initially enrolled 43 students and has maintained an annual intake of 40 students in recent years. In 2024, all three schools were selected to pilot the "joint five-year higher vocational education" programs to replace the "3+2" programs, namely after studying in the school for five consecutive years (divided into three years of secondary VET stage and two years of higher VET stage), students can directly obtain a Da-Zhuan diploma, no longer need to enter vocational colleges.



The enrollment quotas of the "five-year" program accounted for 34.9%, 25.6%, and 46.4% at Schools A, B, and C, respectively. Among them, schools A and C explicitly stated that graduates from these programs could still pursue undergraduate education through the Da-Zhuan-to-undergraduate examination, which strengthened their narrative of further education prospects.

As a government-created image project aimed at promoting college access, integrated-education programs implement a low-threshold—or even "zero-threshold"—transfer mechanism when determining the eligibility of students moving from secondary VET to higher VET. In the "3+2" programs, students are not required to take the unified entrance examination organized by the province or vocational colleges. Instead, they participate in a comprehensive "transfer examination" after being deemed qualified through a process assessment. Vocational schools generally adopt a strategy of "symbolic assessment" to relax quality control. The process assessment, which evaluates students' daily academic and behavioural performance, typically only screens out those who violate behavioural discipline. The transfer examination serves as a qualification exam and allows for two attempts. With school-provided tutoring, students generally pass without difficulty.

Even in the more rigorous "3+4" programs—where students must take the Spring *Gaokao* to transfer—students at School C have achieved full transfer success, thanks to the school's "targeted tutoring": "No one has failed to meet the standards so far" (C2-HoAD-1111). This symbolic approach to technical quality control has been tacitly accepted by the government, reflecting a kind of "collusion" between governmental bodies and schools, and highlighting the organizational logic of survival under external pressures.

In contrast to the commonly relaxed transfer requirements, there are notable differences in the admission mechanisms of the "3+2" and "3+4" programs. The former accommodates a large number of students (accounting for between one-quarter and nearly half of total enrollment quotas at the three schools in 2024) and operates with an almost "zero-threshold" admission policy to ensure the sustainable operation of vocational schools. The latter, however, enrolls far fewer students (only 2.1% at School C in 2024) and maintains a "high-threshold" admission policy to preserve the selectivity and "elite" status of bachelor's degree programs.

As is common in most provinces and cities, vocational school pathways in City X include both independent admission and admission through the city-wide high school entrance examination (commonly referred to as *Zhongkao*). The government mandates that all integrated-education programs admit students solely through *Zhongkao*, following a "preference-based, score-first" admissions policy that prioritizes applicants with higher exam scores. In 2024, the admission threshold for "3+2" programs was not only significantly lower than that for "3+4" programs, but was often even lower than that for "vocational *Gaokao*" programs. At School C—renowned for its strong performance in HE preparation—the minimum cutoff score for "vocational *Gaokao*" programs exceeded that of the "3+2" programs by over 100 points.

It is not difficult to see that the design purpose of the admission mechanism for the integrated-education programs is essentially the same as the transfer mechanism, that is, both highly serve the needs of the organization. Vocational schools differentiated two integrated-education programs and their admission standards to attract students at different levels, so as to meet their diversified development needs. Moreover, the admission threshold of the "3+2" programs has formed a significant "institutional low-lying land" compared to the "vocational *Gaokao*" program, further demonstrating the government and schools'



intention to support the expansion of HE opportunities. This gradient design is essentially a concrete manifestation of the resource dependence theory: in a field where competition for students is intensifying, schools absorb marginal student groups through fictitious thresholds to expand the organization's resource pool.

4.3. "Primarily Focused on the 'Spring Gaokao'" and the Diversion and Stratified Management of Students

Since its introduction in 2012, the provincially unified Spring Gaokao pathway has gradually become a key focus of vocational schools' HE preparation strategy. Among the multiple pathways to HE, the route of top-skilled talent admission with exam-exemption opens to only a small number of students. Open admissions serve as a fallback option, resembling the open admission policies of American community colleges. Vocational college's comprehensive evaluation for admission was mainly designed for general high school students. The selectivity level for vocational colleges' independent admission is generally lower than that of the Spring Gaokao. Notably, before 2022, the independent admission pathway allocated a large number of enrollment slots, with many vocational colleges setting exceptionally low admission scores, making entry requirements almost nominal. Since the formal implementation of the "vocational Gaokao" system consisting of various pathways in 2022, not only are general high school graduates unable to continue to take the Spring Gaokao, but the number of independent admission quotas for vocational colleges has been significantly reduced. In addition, the Spring Gaokao is considered more authoritative, credible, and legitimate than the independent selection tools of vocational colleges, so "some good vocational colleges no longer enroll students through independent admission" (A2-HoFD-0612). More importantly, the Spring Gaokao provides a new path to undergraduate programs, which symbolizes high academic qualifications, and is less difficult than the traditional Gaokao, thus being sought after by secondary vocational students, parents, and schools.

The most typical manifestation of case-study schools' emphasis on the Spring *Gaokao* is the diversion and stratified management of students aiming at increasing the undergraduate admission rate. But there are apparent variations in management models across the schools. School B, since 2013, has established dedicated Spring *Gaokao* classes. Starting in 2016, the school tracked the number of students achieving the required scores for undergraduate admission each year. The scale of the Spring *Gaokao* classes has gradually expanded, from being initially offered by just one department to now being available in all five departments and over 20 majors. The school used to select students for the Spring *Gaokao* class based on internal exam scores, but starting in 2024, the selection standard shifted to a unified *Zhongkao* score. Students with lower scores are redirected to the school-enterprise cooperation classes. Within the Spring *Gaokao* class, School B implements further stratified management in the final year of study. Based on the results of mock Spring *Gaokao* and monthly tests, students have been classified into two groups: "key targets" (those predicted to be able to enter undergraduate programs) and "marginal students" (those who, with additional tutoring, are expected to have a chance of gaining undergraduate admission).

Unlike School B, which isolates students into HE and non-HE zones through separate class arrangements (Tian, 2022), School C, with the highest undergraduate admission rate, implements an "all student progress to HE" approach. Previously, School C only offered higher vocational education departments for integrated-education programs and skills-cultivation departments focused on employment. Since 2016, due



to nearly all students opting for further education, the school cancelled its "skills-cultivation" departments and began offering Spring *Gaokao* classes in all majors, which attracted a large number of students to enroll. School C not only selects students for the Spring Gaokao classes based on their *Zhongkao* scores, but also implements stratified management within each class, dividing students into three categories: "undergraduate candidates," "marginal students," and "falling behind students." Starting from the first year, the school dynamically adjusts student classifications based on academic performance and provides differentiated tutoring. By the third year, "falling behind students" who are struggling and unlikely to be admitted to undergraduate programs are guided to participate in the vocational colleges' independent admission route, which occurs before the Spring *Gaokao*. This helps to redirect them, avoiding any negative impact on the Spring Gaokao class's learning atmosphere, and allowing teachers to focus on helping "undergraduate candidates" and particularly "marginal students" preparing for undergraduate admission.

Compared with Schools B and C, School A, with a lower undergraduate admission rate, has also undergone changes in student management, but its management of undergraduate progression is relatively loose. Previously, the school offered three types of cultivation programs in each major: "3+2" class, Spring Gaokao class, and skills cultivation class (focus on employment). Among them, "the admission score of the Spring Gaokao class is higher than that of the '3+2' class, and the students with the worst grades go to the skills cultivation classes" (A4-HoFD-1129). Due to increased student enrollment, insufficient teachers and facilities, skills cultivation classes were abolished in 2018. Unlike schools B and C, School A's Spring Gaokao classes don't have a strict selection mechanism for entry, and, hence, nearly one-third of students in these classes lack the intention to pursue undergraduate studies. These students are unwilling to accept a high-intensity study schedule, which prevents the school from arranging evening study sessions, weekend remedial classes, or intensive collective tutoring for Spring Gaokao, as are done in schools B and C. The school leaders intend to improve the school conditions as soon as possible, and imitate School B to set up separate classes for students who aspire to attend undergraduate programs to increase its undergraduate admission rate, thus confirming the mimetic isomorphism mechanism--when a certain type of school model is constructed as a "successful model," competitors will actively copy its symbolic characteristics to reduce uncertainty risks.

It is important to note that although School A's management of HE preparation is relatively relaxed, in the third year, the school assigns its most excellent teachers to students, and implements a "target student" management system similar to schools B and C. Based on students' regular exam performance and their willingness, the school selects a group of students who are likely to gain undergraduate admission as "target students" and provides them with specialized tutoring. Each Spring *Gaokao* class has about 10% of students identified as "target students." If selected students fail to adhere to discipline or show a lack of motivation to study, they may lose their "target student" status. However, School A doesn't further classify the target students based on their high or low likelihood of gaining undergraduate admission. In addition, School A "required teachers not to refuse students' questions about homework at any time" (A3-HoFD-0612) to respond to students' learning needs in a timely manner.

The differences in the forms of the student management models of the three schools reflect the different organizational orientations in constructing the boundaries of HE management (Lamont & Molnár, 2002). While School B constructs basic boundaries through physical space isolation, School C uses a dynamic labeling system to implement cognitive boundaries and School A superimposes label symbols on the basis of



the boundaries of the time dimension. It is worth noting that despite the different forms, the essence of the three student management models is the same, that is, they all adopt an efficiency-oriented classification operation mechanism, which reflects the institutionalized classification of students by educational organizations. Moreover, the schools from our case studies successfully transformed specific student groups into performance capital for the organization to maintain HE progression performance through organizational technologies, reflecting the opportunism of organizational behavior (Williamson, 1975).

4.4. Systematic Spring Gaokao Tutoring and "Low Entry, High Exit"

Under the intertwined influence of policy regulations, family demands and organizational survival logic, the schools from our case studies actively explored effective HE tutoring strategies and integrated them into an institutionalized system. After years of exploration, schools B and C have established relatively mature Spring *Gaokao* tutoring systems, developing the Spring *Gaokao* "One-Two-Three-Four-Five" work plan and the Spring *Gaokao* "One-Two-Three-Five" teaching management mode, respectively. Although School A's tutoring system is less developed, it has a mature approach to building a high-quality teaching team to support HE progression. Overall, due to the similar environmental pressures they face, the three schools have many common features in their tutoring strategies, which are mainly reflected in the following aspects.

First, the schools from our case studies work on enriching teaching research centered around the Spring *Gaokao*, so as to "enhance teachers' ability to prepare students for the exam" (A1-SL-1121). The teaching research system, which focuses on summarizing teaching experiences, identifying teaching issues, and researching teaching methods, is a characteristic feature of China's educational management and quality assurance system (Y. Zhu, 2024), and thus serves as a crucial support for curriculum reforms in vocational schools. Initially, School B organized teaching research within each department, but in order to collectively improve the teaching quality aligned with the Spring *Gaokao* and eliminate individual teachers' cognitive biases through standardization of knowledge, the school established a school-level teaching research group for Chinese, mathematics, and English, and regularly conducts unified activities.

The schools from our case studies urged teachers to internalize the knowledge framework of the Spring *Gaokao* into teaching habitus through teaching research activities. On one hand, through collective course preparation, optimizing teaching designs, and in-depth study of exam standards, teaching methods, and test-taking strategies, the schools comprehensively advance research on teaching for the Spring *Gaokao*. On the other hand, through sharing typical experiences, expert guidance and specialized meetings, the schools engage in diagnostic and corrective measures for exam-related teaching, effectively enhancing the precision of instruction. For example, during year 3, School C's three non-integrated-education departments not only hold weekly teaching research meetings, but also conduct exam analysis meetings after each monthly exam. In these meetings, each teacher representative has been required to analyze the issues students faced in the exam from multiple perspectives and propose the next steps for teaching plans. It is not difficult to see that the organizational design of teaching research activities not only ensures that teachers' teaching moves towards predetermined goals through timely research, information feedback and adjustments, but also strengthens the autonomy of HE guidance by defining teachers' cognitive boundaries (Lamont & Molnár, 2002).



Second, in the final year of study, the schools implement a "sea of questions" strategy and concentrated skills cultivation to improve students' "test-taking" abilities. Similar to general high schools, vocational schools arrange for non-integrated-education and non-employment-oriented students to complete all knowledge and skills learning in the first two years, with the third year dedicated to preparing for the Spring *Gaokao*. Since the government has established a composite assessment mechanism of academics and skills in the Spring *Gaokao*, vocational schools have developed an "ambidextrous capability" to cope with the comprehensive requirements (Tushman & O'Reilly, 1996). This is reflected in the practice of the schools from our case studies, which emphasizes both skill cultivation and cultural course preparation. At the same time, the school's teaching arrangements based on examination requirements and student characteristics reflect the presence of the logic of efficiency.

To be specific, given that students generally have lower motivation but that certain knowledge areas (including cultural courses and professional theory courses) account for a larger proportion of the Spring *Gaokao*, the schools use the typical "sea of questions" strategy (C2-HoAD-0619), which is commonly employed in general high schools. Students engage in three rounds of review focused on exam topics, practicing a large volume of exercises on exam-related content, and taking monthly exams, midterm and final exams, as well as a provincial "mock Spring *Gaokao*" to enhance their understanding and mastery of key contents of the Spring *Gaokao* and identify gaps in their knowledge. In contrast, the frequency of skills-based testing practice is lower. However, once Shandong province releases the exam modules of certain majors, the schools organize targeted and concentrated skills-intensive training lasting one to two months. After the "skills testing" portion of the Spring *Gaokao* is completed, students then focus exclusively on knowledge-based tests. This arrangement has a dual function: It internalizes cultural knowledge through intensive examination training and makes up for the insufficient cultural capital stock of vocational students; meanwhile, it utilizes the time difference between skill tests and knowledge tests to build a segmented control mechanism and reduce the organizational management risks brought about by students' cognitive load.

Third, a variety of incentive measures have been introduced to motivate both teachers' tutoring efforts and students' learning efforts. Schools from our case studies generally offer awards, honors, and performance-based incentives to teachers who excel in teaching year 3 students and HE tutoring. As an interviewee from School A noted: "Awards and honors have a significant impact on teachers' professional title evaluations, thus playing an important role in motivating teachers" (A2-HoFD-0612). When calculating teachers' workloads, contributions to Spring *Gaokao* tutoring are factored in. To encourage students to enjoy studying for the Spring *Gaokao*, the schools from our case studies also used incentives in the form of both spiritual and material rewards. For example, at School C, students are subject to a "thousand-point evaluation system" starting from the first year. This system allows students to earn extra points each time they ask a teacher a question. The results of this assessment are used for selecting outstanding students, evaluating applications for the National Scholarship, and the eligibility to join the Communist Youth League.

Recognizing the influence that peers have on important outcomes such as academic performance and educational trajectories (Barrios-Fernández, 2023; Sacerdote, 2011), the schools from our case studies consistently emphasize the role of peer motivation and mutual support. Common measures include inviting high-achieving current students and alumni to share HE preparation experiences, and encouraging students to form study groups where they can motivate and supervise each other. School C, for example, observed that, "for motivated and diligent students, mutual help plays a significant role" (C2-HoAD-0619). They also



noted that if a student misbehaves and causes the group to face collective punishment, it is likely that the student will find it difficult to be accepted back into the group. It can be seen that in order to achieve the goal of increasing the undergraduate admission rate, the incentive mechanism of case-study schools presents a coupling of formal systems and informal mobilization.

The teaching research activities around the Spring *Gaokao*, the students' "exam preparation" training, and the organizational practice of teachers and students being included in the multi-incentive system, show that the construction of the HE tutoring system in the schools from our case studies is driven by the efficiency mechanism. This mechanism has a positive impact on the organizational performance and reputation. For example, in 2023, 538 students from School C took the Spring *Gaokao*, with 50.2% of students successfully qualifying for undergraduate programs (compared to the provincial average of 30%). Due to the predominantly disadvantaged background and weak academic foundation of vocational students, School B describes its tutoring achievement as achieving the "low entry, high exit" goal. The outstanding results of the promotion to undergraduate programs and the narrative of "low entry and high exit" responded to the expectations of the institutional environment, making the schools from our case studies gain higher recognition and legitimacy in society. This process confirms the core proposition of institutional theory: organizational behavior is a strategic competition for legitimacy resources rather than a simple pursuit of efficiency (DiMaggio, 1988).

5. Conclusion

Our study found that the educational expectations of the key resource-dependent stakeholders—namely, parents and students—have long reshaped the survival strategies of vocational schools. All three schools from our case studies exhibited a convergent evolution: strengthening the function of further education while weakening the focus on employment. This confirms that, amid intensified admission competition, schools seek social legitimacy through institutional isomorphism. Thus, many vocational schools are not merely supporters of government policies; rather, they have become active promoters of the "HE progression" boom, aligning with their organizational interests and reinforcing their legitimacy.

To improve HE admission rates, especially undergraduate admission rates, the schools from our case studies implemented homogenized efficiency mechanisms to respond to external pressures. On one hand, the widely adopted integrated-education programs are embedded in a normative commitment sanctioned by the government (as an educational advancement pathway) and reinforced by a cultural-cognitive template rooted in credentialism (the "university dream" narrative). This alignment is supported by regulatory rules—specifically, low-threshold transfer examinations—thereby constructing institutional linkages across educational levels. On the other hand, schools actively reform their educational and instructional practices to reframe their organizational identity as preparatory institutions feeding into HE. This is reflected in their adoption of classification-based student management systems (varying in form but similar in substance) and tutoring systems characterized by strong "examination-oriented" features.

This transformation in organizational identity not only addresses the efficiency demands posed by technological and resource-related challenges but also meets the legitimacy requirements of the institutional environment. It reveals the distinctive logic of organizational adaptation in the ongoing reform of secondary VET in contemporary China.



Although the universality and representativeness of the findings may be limited by the small-scale nature of the case study approach, the research nonetheless provides valuable insights and implications for understanding vocational schools' role in enhancing HE access—both in China and globally. One of the core objectives of China's VET development is to promote social mobility (J. Zhang et al., 2020). As in many countries (Eini et al., 2023), vocational students in China predominantly come from disadvantaged backgrounds, with over 70% from rural or low-income urban families (Gao, 2015; Ministry of Education, 2024a). With the introduction of multiple pathways to HE, China's vocational schools have transformed from being a "broken ladder" that offered limited mobility (Xiong, 2015) to an "elevator" that effectively delivers HE opportunities.

Moreover, feedback from the schools from our case studies indicates that actively managed HE tutoring not only fosters institutional development but also cultivates a study culture (Van Houtte, 2006), enhancing students' academic learning, skill development, and personal growth. However, challenges remain. In Shandong, most undergraduate placements are provided by private universities, which charge significantly higher tuition fees. As a result, some students forgo admission due to financial constraints. Many public universities are still reluctant to recruit vocational graduates. Affordable undergraduate admission opportunities, therefore, remain scarce.

Considering that vocational students are often a "hidden disadvantaged" group during the transition from VET to HE (Brunken & Delly, 2011), the expansion of HE opportunities must be supported by proactive government regulation. Countries aiming to improve college access for vocational students can learn from China's approach, adopting robust policy measures to broaden HE pathways and strengthening institutional support for HE preparation within vocational schools.

At the same time, the role of vocational schools—as organizations that directly influence students' HE aspirations and outcomes—must not be overlooked. For example, in some Israeli vocational schools, teachers hold low academic expectations for their students and even discourage them from pursuing HE (Barak & Shoshana, 2022). Similarly, while secondary education in Finland may formally or informally prepare students for HE (Haltia et al., 2022), the learning culture in vocational schools remains weak in countries like Finland, Belgium, Sweden, and Greece (Barak & Shoshana, 2022).

To effectively expand HE opportunities, vocational schools should prioritize their role in further education, actively shift teachers' perceptions, cultivate a strong culture of academic aspiration, and provide effective HE tutoring and guidance.

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Conflict of Interests

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