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THE GUIDELINES OF EDUCATIONAL MANAGEMENT TECHNICAL SCHOOL IN GUANGZHOU

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Abstract

Amid the rapid development of global TVET, Guangzhou Technician College, a key base for cultivating skilled talents in South China, must upgrade its management model. Current curricula stress theory while lagging behind industrial upgrades, with faculty lacking industry experience, students showing weak entrepreneurial and digital skills, and disconnected school-enterprise data chains—all causing employment difficulties and low startup survival. Drawing on Spain's "tiered certification + entrance exams," Germany's "dual system with 70% job rotation + IHK certification," and Australia's "real project experiential learning," this paper proposes three reforms: First, deepening a "1.5-year school + 1.5-year enterprise" system where students study basics in school, then rotate through three paid enterprise posts, earning certificates and tenure. Second, building a "mentor pool + project repository," annually sourcing 15 enterprise renovation projects for faculty-student bidding, with profits shared (20% college, 30% enterprise, 50% students) and winning teams gaining 500,000 yuan funding. Third, creating a "graduate big data profile" tracking employment, salaries, and startup survival at 1, 3, and 5 years, with enterprise feedback guiding curricula. Through reforms in academics, faculty, projects, and data, the college will align majors with industries, teaching with positions, and training with evaluation, boosting skills and employability.

Keywords: educational management, technical school, Guangzhou Technician

Introduction

Technical and vocational education and training (TVET) is recognized as a key driver of economic growth and development worldwide. It provides individuals with an effective way to acquire practical skills and technical knowledge across various industries. For Malaysia, TVET is central to achieving its aspirations of becoming a high-income economy. To this end, the government has implemented policies and measures such as the National Dual Training System (NDTS) and the Malaysian Qualifications Framework (MQF) to comprehensively enhance the quality and industry relevance of TVET. (Rasul et al., 2015).

Technical education, as a key component of China's education system, connects and supports other areas, including general education and higher education. It plays an irreplaceable role in cultivating high-level technical and skilled personnel, not only



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improving the structure of the education system but also indirectly promoting sustained growth in the national economy. With the economic transformation and upgrading, the demand for technical talent is growing across all industries. As society continues to raise the standards for technical school graduates, it also places higher demands on the comprehensive quality of students in technical institutions.(Zhirong Niu,2018).This demonstrates that vocational education and technical talent hold significant importance globally, serving as vital components of national technological advancement. In an era of rapid technological and information development, Guangdong Province-China's most populous region-faces increasingly challenging employment prospects for students in Guangzhou amid its growing population. Most graduates from regular universities struggle to secure jobs, partly due to outdated curricula and limited access to cutting-edge training resources. While only a few well-funded institutions provide excellent faculty and modern technical education, this study examines higher vocational education systems across regions. By analyzing Guangzhou's local context, it explores strategies to enhance on-campus technical learning management in vocational colleges. These initiatives aim to help graduates secure desirable positions, reduce career competition pressures, and ultimately contribute more effectively to national development.

Educational management issues in technical schools in various countries

Imbalance theoretical courses and practical education courses knowledge in the course :

Innovation and entrepreneurship education in technical colleges has exposed significant shortcomings in curriculum, teaching methods, faculty, and student engagement: curriculum design is not fully aligned with market demand, and teaching methods lack practicality and interactivity. Teachers' professionalism and practical experience need to be improved, and students lack sufficient initiative and opportunities to participate in real projects. In short, course content must closely follow market trends, teaching methods must strengthen practical application and interaction, faculty capabilities must be upgraded simultaneously, and more platforms and opportunities for students to actively practice must be created.(Xie et al., 2022).

There is a shortage of educational resources for innovative and entrepreneurial teachers, and students have a weak awareness of independent entrepreneurship :

Technical colleges students have increased opportunities to participate in innovation and entrepreneurship education, but there is a scarcity of teachers for innovation and entrepreneurship courses, and students' learning commitment needs to be enhanced. (Sousa & Costa, 2022). In technical colleges, students are gaining access to innovation and entrepreneurship education through expanding channels. However, there remains a shortage of high-quality instructors to match these opportunities, and students' enthusiasm for learning still needs further stimulation. As a crucial component of professional education, innovation and entrepreneurship courses consistently emphasize the deep integration of theory and practice. Through systematic training, they enhance students' leadership skills, communication abilities, teamwork awareness, and overall entrepreneurial competencies.



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Education in schools is out of touch with social market requirements:

Only by keeping pace with technological trends, continuously updating content, and precisely aligning it with industry needs can technical colleges' innovative and entrepreneurial education remain viable. With the upgrading of industrial structures and the widespread application of new technologies, market requirements for talent are constantly evolving. The industry-education integration model aligns with the mission of technical colleges to cultivate applied talent while meeting the long-term needs of supply-side structural reform in vocational education. It not only significantly enhances students' innovative awareness and entrepreneurial capabilities, but also provides strong support for graduates' successful employment.(Maaodhah et al., 2021).

Lack of Systematic Evaluation and Feedback Mechanisms :

The current quality assessment mechanism of the technical education system is still weak: graduates from technical schools and vocational high schools are required to take a final qualification examination organized by the National Examination Committee, but the examination lacks unified standards and fails to effectively connect with the industry's demands for graduates' actual abilities and qualifications. (Oleg Komarov, 2016)

At the student level, key indicators such as three-year post-graduation startup survival rates, revenue scale, and employment creation numbers are not included in annual quality reports, resulting in a disconnect between "teaching quality" and "achieving results." At the enterprise level: After school enterprise partnerships terminate, feedback channels for employers 'satisfaction with graduates' entrepreneurial competencies and job competency gaps become broken, leading to curriculum improvements often based on teachers' subjective experience rather than market evidence. At the data level: Most institutions have yet to establish alumni entrepreneurship databases or third party evaluation systems, making it difficult to use big data profiling for precise diagnosis of curriculum shortcomings and provide credible performance evidence to governments, foundations, and venture capital firms for securing sustained resource investment.

Inadequate Entrepreneurial Ecosystem and Resource Support :

To address employment pressure and stimulate economic growth, the Chinese government is vigorously promoting the widespread introduction of entrepreneurship courses in universities. Within this policy context, institutions urgently need to deepen collaboration and prioritize the cultivation of innovative thinking and entrepreneurial spirit. However, entrepreneurship education at vocational colleges still faces significant shortcomings, including a lack of standardized curriculum design, a weak faculty, and a significant disconnect between theory and practice. These shortcomings represent key bottlenecks hindering the in-depth development of student entrepreneurial practice.(Ronghua Zhou,et al., 2024)

A survey of start-ups established in the Australian Capital Territory (ACT) for more than 25 years found that around 20% of founders or founding team members had vocational education and training (VET) qualifications. With the exception of the Interactive Entertainment Academy's recently launched digital gaming program, founders of other companies generally believed that their entrepreneurial skills and knowledge did not come



from VET courses.(Don Scott-Kemmis,2017)

Educational management methods of technical schools in various countries

Spain:

In Spain's current education system, vocational education (Formación Profesional, FP) has evolved from a "backup option" on the academic track to a dual-accredited, dual-credentialed "golden path" alongside general high school education. It is both legally protected and highly recognized by the labor market. For young people who have completed compulsory education (approximately age 16), FP offers a flexible and practical career path. After secondary school, students can choose from a variety of further education options, including vocational education. Secondary vocational education (Grado Medio) lasts two years, and after passing an entrance exam, students can pursue employment or further study. To qualify for university, general high school graduates must take the university entrance exam, while students who have completed FP can obtain equivalent qualifications through the vocational training entrance exam. More notably, students who complete higher vocational education (Grado Superior) can enter university directly, with exemptions from certain courses.(Alexandra et al., 2025).In addition, the Spanish Ministry of Education and Vocational Affairs (MEFP) has jointly established the "FP Dual Quality Seal" with regional governments to provide tax breaks and talent subsidies for participating enterprises. Meanwhile, the "European Vocational Education Passport " system guarantees the mutual recognition of credits and the convenience of internship and employment for students within the EU.

Germany:

Entrepreneurship education is treated as a systematic project, focusing on cultivating students' adaptability, learning capacity, and practical skills while integrating entrepreneurial culture into all aspects of teaching and daily life. The faculty team emphasizes diversity, with entrepreneurship course instructors requiring business management experience. The institution also maintains long-term recruitment of corporate part-time entrepreneurship mentors through programs like the "mentor-apprentice pairing" initiative. Integration can start at the student level, where students can actively incorporate entrepreneurship into existing training; at the same time, they still mainly acquire vocational education and training (VET) knowledge through theoretical learning, practical operations or apprenticeships(Sandirasegarane et al.,2016).A dual-system approach is implemented where students serve as both paid apprentices in enterprises and vocational school students. Most of the three-year courses include real workplace rotations, so that graduates can obtain IHK/HWK industry certification and enterprise work experience when they graduate. Most graduates are directly employed or admitted to the University of Applied Sciences without examination for further study.

Australia

In recent years, a remarkable trend has emerged in Australia's technical education system: Undergraduate, postgraduate, and doctoral students in Information and Communication Technology (ICT) are demonstrating unprecedented enthusiasm for



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entrepreneurship education and practice. To them, entrepreneurship is not just about creating wealth—it represents a vital path to self-fulfillment and generating social value.

For entrepreneurship education for students majoring in information and communications technology (ICT), a hands-on learning approach has become a key path. This model, by deeply engaging students in the real-world development process of a startup, focuses on honing practical skills such as project management, teamwork, and critical thinking. Currently, many universities have begun offering such courses, guiding students to engage in real-world business projects, often in collaboration with industry partners.(Jianhua Liet al., 2023)The thriving entrepreneurial education for ICT students in Australia is the result of four converging forces: policy initiatives, university reforms, market opportunities, and youth culture. This movement not only injects sustainable innovation into Australia's economy but also provides a valuable model for global higher education in cultivating "technology-driven entrepreneurial leaders".

Guangzhou:

Guangzhou's technical schools primarily manage education through a joint school-enterprise partnership, integrating work and study. Vocational education is the type of education most closely aligned with economic and social development. The integration of industry and education is a key path for vocational colleges to promote talent development and collaborative industrial upgrading. By continuously deepening this integration, we will steadily promote the integrated integration of production, teaching, learning, and research, and work together to create a model for collaborative education between schools and enterprises in modern vocational undergraduate programs(Yiwen Wei.2022).This allows students to complete basic professional work on campus before graduation, enabling them to understand the hiring and job requirements of social enterprises before graduation, thereby enhancing their employability. Most existing majors have implemented a "dual mentor system," combine enterprise knowledge with course knowledge in the course. In-school faculty and enterprises jointly train students, integrating teaching content with work content, achieving a seamless integration of educational goals and professional standards. Graduates can quickly begin work, eliminating the need for further training by enterprises and, to a certain extent, reducing employee training costs.

Conclusion

The analysis highlights a pronounced gap between current vocational education curricula and actual market demands. Existing programs tend to emphasize theoretical instruction at the expense of practical application, thereby falling short of supporting ongoing industry upgrades—a limitation that directly undermines student employability. Across the country, many educators and training institutions lack sufficient industry experience, leading to the underutilization of both on-campus training facilities and off-campus internship opportunities. Moreover, student engagement remains weak, largely due to uninspiring course designs that do not effectively foster entrepreneurial awareness, practical skills, or digital literacy. Moreover, the absence of evaluation systems prevents schools from tracking graduate entrepreneurship rates, employment outcomes, and job quality metrics, while



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creating information gaps between educational institutions and industry partners. To address these challenges, I propose the following recommendations for Guangzhou Technical College's student management system: Enhancing on-campus skill development and boosting entrepreneurship and employment rates through targeted educational reforms. The government organizes an annual "Industry Demand Survey" to compile a list of occupations in high demand by enterprises. Based on this list, Guangzhou municipal authorities and schools can adjust their academic programs to include most urgently needed specialties, strengthening the connection between campus curricula and industry needs. This suggests that my country's vocational education urgently needs to overcome the institutional and mechanism barriers currently facing school-enterprise collaboration. By collaborating with enterprises, the government can build a platform for industry-education integration, strengthening practical teaching and talent development. Specifically, efforts can be made to further deepen industry-education integration by improving the policy system, strengthening government coordination and guidance, enriching the scope of collaboration, and expanding the development space for vocational colleges (Fan, R, 2023). The curriculum assessment system features three modules: theoretical knowledge foundation, practical core technologies, and real-world enterprise projects, with joint evaluations by faculty and industry professionals to enhance alignment with industrial demands. A dual improvement system for faculty and practical training is implemented: in-house teachers collaborate with corporate engineers in teaching, while enterprise mentors provide at least 5 hours of weekly on-campus guidance. Faculty members undertake two months of annual internships at enterprises. Training bases are upgraded to ensure over 50% of students' technical courses are completed on actual production lines, increasing utilization of off-campus facilities. An incentive mechanism encourages student entrepreneurship through micro-entrepreneurship electives, where teams complete thousand-yuan real projects and participate in innovation competitions. Top-performing groups may access municipal startup funds for further development, boosting course engagement. A skills credit exchange system allows students to convert corporate certifications and competition awards into credits, with accumulated points enabling early employment opportunities. Additionally, Guangzhou has established a technical education big data platform that regularly collects graduate employment rates, entrepreneurship rates, salary data, employer satisfaction surveys, and student feedback suggestions. After the completion of the cooperation, the cooperative enterprises are required to fill in the graduate ability feedback form, and the data statistics are fed back to the platform for timely adjustment of the subsequent campus courses. Through examining vocational education management models across different regions, we observe distinct approaches: Spain employs a "tiered certification system with college entrance exams" to bridge vocational and higher education pathways; Germany's dual system combines 70% job rotation with IHK certifications enabling immediate employment upon graduation; Australia utilizes real-world business projects for experiential learning in ICT programs. While Guangzhou's current "school-enterprise collaboration + dual-teacher system" has moved classrooms into actual workshops, it still lacks depth and data-driven closed-loop systems. Drawing on international models of technical education management, I propose the following



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recommendations for Guangzhou's technical education system: 1. Enhance the "dual-system" model by adopting Germany's IHK standards, transforming the existing school-enterprise cooperation "2+1" program into a "1.5-year school + 1.5-year enterprise" rotation system. Students complete foundational modules in 1.5 years at school, followed by 1.5 years of paid rotational work across three key positions at partner enterprises. Graduates will receive industry certifications and enterprise tenure credits, with academic credits adjusted based on job performance. 2. Establish an "entrepreneurship mentor pool" and real-world project database, adopting Australia's ICT approach. The college should annually solicit 10-15 authentic commercial or technical renovation projects from industries, publicly recruiting corporate executives and technical experts as mentor apprentices. Student teams of 3-5 members bid for projects, with profits or commercialization benefits split 20% to the college, 30% to enterprises, and 50% to students. Outstanding teams may directly secure 500,000 yuan seed funding from the municipal innovation fund. 3. Develop a "data closed-loop" quality tracking system modeled after Spain's CE3A-Grado Superior certification logic. Collaborate with the Municipal Human Resources Bureau to build a "graduate big data profile" that automatically captures social security records, salary data, and business survival rates at graduation (1, 3, and 5 years post-graduation), updating course and project databases accordingly. Real-time feedback from enterprises will drive professional adjustments, achieving a digital closed-loop system covering enrollment plans, training processes, and employment outcomes.

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