

Improving Vocational Education in Jiangxi: The Role of Curriculum, Teachers, Industry Links, and Student Engagement

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DOI Link: <http://dx.doi.org/10.6007/IJARBS/v15-i9/26535>

Published Date: 17 September 2025

Abstract

Vocational education is essential for preparing a skilled workforce that will meet the needs of the 21st century economy. Nevertheless, as an application-oriented undergraduate program, Jiangxi, China, vocational undergraduates are still facing many challenges to be effective. This research endeavours to examine the critical factors impacting the success of these programs, specifically in the areas of curriculum relevance, teacher quality, industry partnerships, and student engagement. Despite national initiatives to update vocational education, many programs in Jiangxi face challenges, namely outdated curricula, few training opportunities for teachers, weak industry connections and lack of student motivation. These problems come together to produce poor graduate employability, and to keep the outputs of education out of line with the sectorial demands of the labour market. This study employs a quantitative research design, anchored in Human Capital Theory and Constructivist Learning Theory. Methods: Using structured questionnaires to collect data among 380 undergraduate students in Jiangxi Province vocational institutions. Using a stratified random sampling method, this ensured that there was representation from a range of socioeconomic backgrounds within the group. Data analysis was performed using SPSS to identify the relationships between the selected variables and overall program effectiveness. It appears from the results that there are strong positive correlations between each of the independent variables and effectiveness of vocational education programs. Specifically, the relevance of curriculum and the quality of the teacher have emerged as the most significant factors, followed closely by the strength of industry linkages and levels of student engagement. This study/research indicates the urgent need to modernise the curriculum and align teacher training to the industry need (active participation from the industry in making the syllabus) for the vocational education to be more responsive and effective. It is also important to note, that bridging student engagement with relevant content and career pathways transforms learning outcomes, and employs the chances drastically. Not only does the contrast between Jiangxi and WA provide important implications for policymakers, educators, and institutional

leaders seeking to reform vocational education in the Jiangxi region and potentially comparable regions, but these findings also demand further questions.

Keywords: Vocational Education, Curriculum Relevance, Teacher Quality, Industry Partnerships, Student Engagement

Introduction

Vocational education plays an indispensable role in shaping a nation's human capital, equipping learners with the practical skills and competencies demanded by modern industries. In the case of Jiangxi Province, China, where rapid industrialization and technological upgrading are transforming the economy, the effectiveness of vocational undergraduate education is not just an educational concern but also a socio-economic necessity. Without a skilled workforce that matches industry requirements, Jiangxi risks falling behind in its ambition to integrate into the knowledge-driven global economy (Pambudi & Harjanto, 2020).

The importance of this study stems from addressing the pressing gap between the existing educational system and labor market needs. Despite ongoing reforms, many vocational institutions in Jiangxi continue to face structural problems such as outdated curricula, insufficiently trained teachers, weak institutional-industry linkages, and low student motivation. These shortcomings directly affect graduate employability and workforce readiness (Fawns et al., 2021). Exploring these challenges is essential because vocational education has the potential to contribute to social mobility, reduce unemployment, and foster inclusive development in Jiangxi and beyond.

Equally important is the social perception of vocational education. In Jiangxi, as in much of China, vocational programs are often viewed as a fallback for students who underperform in conventional academic pathways, creating stigma that undermines student motivation and recruitment (Tian & Chen, 2020). This perception reduces the attractiveness of vocational programs, further weakening their role in producing an innovative and competitive workforce. Teachers also face limitations due to a lack of structured professional development, minimal exposure to industry practices, and insufficient training in modern pedagogical methods. Without such support, they find it difficult to deliver high-quality, application-oriented learning experiences (Liu & Zhang, 2021).

Industry partnerships are another vital factor. In Jiangxi, collaboration between enterprises and vocational institutions is often symbolic rather than substantive, leaving students without the opportunity for internships, apprenticeships, or real-world exposure (Niu, 2024). This disconnect between classroom learning and workplace realities diminishes the job readiness of graduates. While government initiatives have been introduced to encourage reform, poor implementation and uneven resource distribution at the local level often limit their impact (Li & Pilz, 2023).

Student engagement is a final but equally critical dimension. Low participation in vocational programs is often linked to uninspiring teaching, societal stigma, and the lack of visible career pathways (Svendsen, 2020). Connecting learning to future careers, improving pedagogical approaches, and providing equitable access across urban and rural socioeconomic groups are crucial steps in making vocational education more effective (Lin & Yeung, 2023).

Therefore, the need to explore curriculum relevance, teacher quality, industry partnerships, and student engagement in Jiangxi's vocational undergraduate programs is urgent. This study is significant not only for policymakers who must design effective reforms, but also for educators, institutional leaders, and employers seeking skilled graduates. Most importantly, students themselves will benefit from improved motivation, stronger career opportunities, and enhanced employability. By emphasizing these four interrelated areas, this research highlights both the utility and the effectiveness of vocational education reform as a pathway toward sustainable socio-economic development in Jiangxi.

Literature Review

As two widely adopted theories, the Human Capital Theory and the Constructivist Learning Theory are also included into the theoretical framework of this Project Research about Jiangxi provincial government efficiency vocational education curriculum at the undergraduate level in China. These theories provide a framework to help gain a foundational understanding of the various factors that impact vocational education and how those factors relate to student outcomes and preparedness for the workforce (Kim et al., 2021). This study aims to provide a comprehensive understanding of how vocational education can be best tailored to meet the needs of students and the evolving landscape of the labor market. This will be done by combining such theories.

Undergraduate level vocational education is a multidimensional process that works in myriad ways. Such aspects are curriculum design, teaching methodologies adopted, and how education courses are industry specific. Several studies have examined different dimensions of vocational education in an attempt to determine how VET can be enhanced to meet the needs of both students and employers.

This finding is then followed in Warahmah (2023) that explores how effective educational programs can be and the need to tailor vocational education to individual student needs. Study findings suggest that successful vocational programs must be designed with a clear understanding of intended outcomes (both academic and practical skills). As a result, this ensures, that students are not only prepared, but be able to apply what they have gained in situations grounded within the real world.

This research by Sriatun et al (2020) is a study about the implementation of learning mathematics in vocational high schools using a problem-solving approach They were found to enhance students' critical understanding and licensing skills by including problem-solving methods into the mathematics-oriented teaching. It helps to connect the theory with practice, making the learnings more relevant and interesting to the students pursuing certificates in vocational courses.

The report of the research by Telyubaeva (2023) examines the effectiveness of vocational training programs for pupils and focuses on the educational, career and migration plans. The results of this study demonstrate the role of vocational training when it comes to finding a stable career pathway for students and deterring students from relocating in search for better opportunities. Vocational programs equip career teachers with market-demand skills, which significantly influence the students' future employment opportunities and economic security.

Carruthers and Jepsen (2020) provide an international frame for vocational education by comparing countries and the outcomes of different systems. Their research demonstrates that cultural, economic, and policy issues are crucial in determining the results of vocational education. Their study illustrates how the success of vocational education on the undergraduate level differs widely from nation to nation. Those VET systems which will probably work best are those that are closely aligned with the needs of the regional economy, and those systems where there are very strong links with industry.

From 2023, Rimal finds out if vocational training programs of light vehicle repair play a constructive role in helping disadvantaged youths in Nepal. The results of this study suggest that vocational training can be an effective tool for social mobility. It also does so by giving students from low-income families skills the economy needs. These programs not only work toward employability, but also often to the economic development of the community they are designed for.

The two programs examined include one from the world of vocational education through Tamrin (2023); examining the characteristics of effective programs for reading ESP. The study underscores that practical measures facilitate vocational students in understanding the reading material relevant to the academic spheres. When ESP students are provided with suitable reading instruction, their reading comprehension skills are developed and as a result, they tend to perform better academically.

As part of their study, Berezovska et al. (2020) investigate how contemporary higher education and vocational education and training are using innovative educational approaches. The study concludes that by utilizing innovative education techniques like blended learning and digital platforms, vocational education can be made more effective. The flexibility and availability of a greater range of contents provided by these emerging education formats enables more doable and more engaging learning for pupils.

According to Kholis, Supriyadi and Mardapi (2021) in their article, there are some key factors that need to be considered in preparing education and training programs for vocational secondary school teachers. Their study results highlight the need for vocational educators to be offered continual professional development. To ensure that they possess the best current pedagogical abilities and knowledge of industry. Effective vocational teacher training programs are essential for maintaining the high standards of vocational education and improving student outcomes.

Wang and Li (2023) use a collaborative filtering algorithm to analyse the efficient implementation of curriculum delivering in higher vocational education. They argue that sophisticated algorithms can allow for customized learning strategies that greatly improve the efficiency of vocational education based on their research findings. Adapting the curriculum so that it meets the needs of the individual student can help educators promote better student engagement and learning outcomes.

According to the research made by Sangita (2021), it studies the relationship between higher education, vocational training to higher education and business success. Data until October 2023 were used for training. This is because graduates from these programs have practical

skills which can immediately be used in the workplace. It shows how essential it is to relate vocational education with the demands and needs of the industry to make sure that freshly graduated people are ready for the job they will be taking up.

Various factors, such as curriculum design, teaching methodologies used, and its relevance to industry's needs, affect the effectiveness of vocational education. The importance of problem-solving approaches, continued teachers professional development, and the use of innovative teaching methods have been highlighted in numerous studies. By taking those into account, vocational education programs could enhance their effectiveness, which will allow students to gain the skills and knowledge needed to become competitive in the labor market and positively contribute to the economic growth.

Conceptual Framework

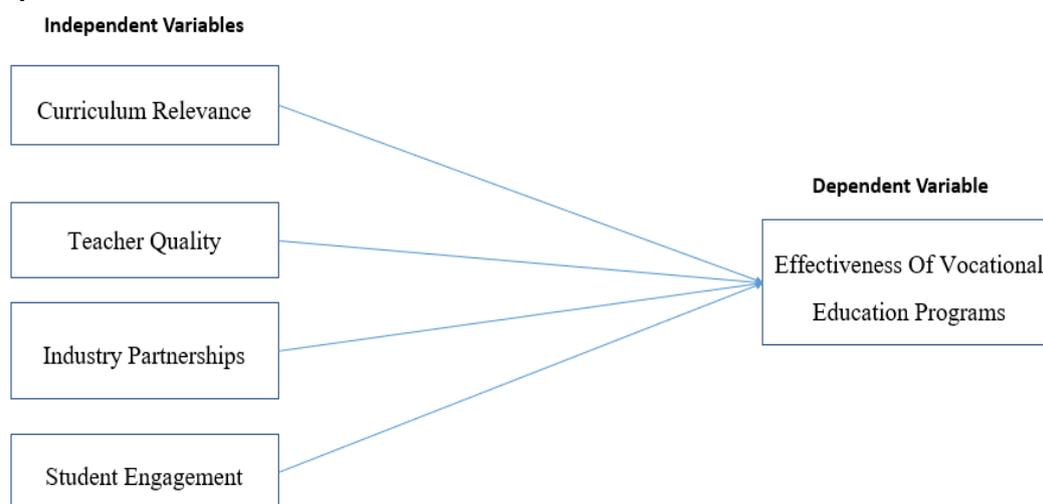


Figure 1: Conceptual Framework

Methodology

Based on the aforementioned issues, this research utilizes a quantitative research plan to examine the effectiveness of undergraduate vocational education programs in Jiangxi, China. Given the need to assess and quantify factors impacting effective vocational education, a quantitative approach that entails the measurement of relationships between relevant variables (curriculum relevance, teacher quality, industry partnerships, and student engagement) is well suited to this research. Question scope is guided by the we seek objective, generalizable findings on how to best inform policy and educational practice in vocational institutions.

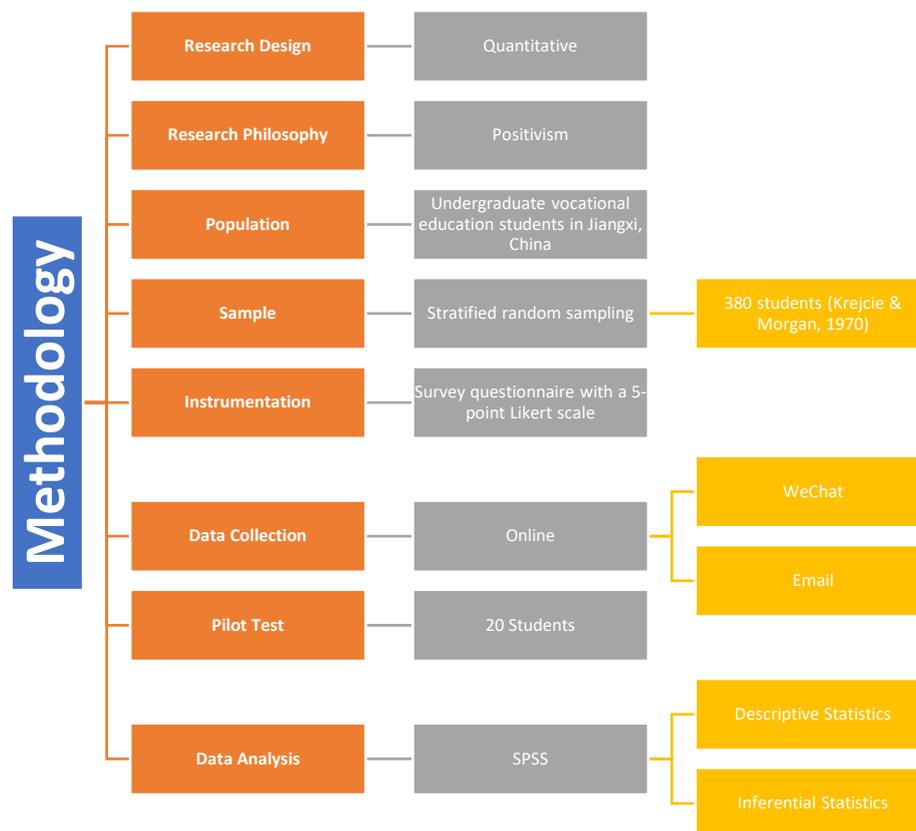


Figure 1: Research Design

The study population includes vocational education undergraduate students in Jiangxi Province, China, who enroll in higher education institutions. One example of a bachelor level vocational education programs are in Jiangxi, where Jiangxi University of Software Professional Technolog, In educational research Krejcie and Morgan (1970) sample size determination table is most commonly used to derive a balanced sample size. Assuming a population of approximately 21,000 undergraduate students, a sample size of 377 respondents is required to achieve a 95% confidence level with a 5% margin of error. The study uses a stratified random sampling method to provide representative coverage of key population subgroups within the population.

To collect the data for this study, the online tools WeChat and email will be used to collect data on the vocational education curriculum efficiency in Jiangxi, China, at the undergraduate level.

This study is primarily concerned with the effectiveness of the vocational education program in Jiangxi, China, when applied at the undergraduate level and analyzed using SPSS. A widely used statistical program is SPSS, which offers a robust basis for working with and analyzing numerical data. Such intuitive interface in R (with a full set of statistical capabilities) was recommended because this study is based on survey data collected through a 5-point Likert scale. Curricular effectiveness will be examined in this analysis in terms of content relevance, instructional quality, resource adequacy, and student results through a systematic exploration of the research objectives. Data were processed and analyzed using SPSS, ensuring accurate and effective data processing, which in turn yields accurate and applicable results.

Discussion

This study's findings stress the urgent requirement for curriculum reform in Jiangxi's undergraduate vocational education programs. Given the speed at which the China's economy is developing—especially in the fields of advanced manufacturing and digital innovation—new vocational curriculum must be periodically revised to ensure it aligns with current industrial needs. Many of the students expressed that their coursework is outdated and unaligned with the current labour market trends, based on a review of the reactions from survey participants. The result is a misalignment that creates an underutilization of skilled graduates in the labour market. The findings corroborate previous work (Fawns et al., 2021; Warahmah, 2023) emphasizing the need for embedding current technological tools and industry-related material within vocational programs. Improved practical applicability in education will also enhance the perception of vocational degrees.

Another major factor that contributed to the effectiveness of vocational programs was Educator quality. The findings suggest that teachers frequently lack recent opportunities to work in the industry, and many have, at best, limited exposure to professional development opportunities that could update their knowledge of the industry. The resulting deficit thwarts their capacity to provide instruction that is relevant and engaging, leading to diminished interest and academic performance by their students. Liu and Zhang (2021) also mentioned that continuing professional development is crucial to help teachers build up pedagogical and practical skills, and that is being supported by the study. Implementing systematic training initiatives, certifications, and collaborative exchanges with industry practitioners can bridge this gap and go a long way in enhancing the teaching-learning process leading to impactful vocational programs.

Another area of concern raised in this study is the industry partnerships—or lack thereof. Despite policy rhetoric promoting collaboration between education systems and enterprises, on-the-ground realities in Jiangxi demonstrate that such work is tokenistic at best, and absent at worst. The absence of meaningful engagement denies students access to internships, apprenticeships, and mentorship programs that can help develop the skills for job-readiness. This study adds to the existing literature (Niu, 2024; Jackson & Bridgstock, 2021) supporting structured exposure in the workplace as valuable for both learning outcomes and employment prospects. More robust and deliberate partnerships with businesses could offer students experiential learning opportunities and enable vocational institutions to better align the design of their program offerings with the needs of industry.

Both an outcome and an enabler of vocational education effectiveness was student engagement. Student engagement is limited by uninspiring teaching styles and by unclear career paths, as well as stigma in society about vocational tracks, the study finds. This muted engagement directly results in low learning gains and low completion of courses. Previous research (Svendsen, 2020; Boyd et al., 2022) has demonstrated that promoting a sense of purpose, providing personalized learning and making clear connections between education and employment can enhance student motivation. It is necessary to reform curricula, train teachers, and develop career services and direct connections with employers that align with the job marketplace.

Lastly, the paper points out specific local circumstances in Jiangxi, according to socio-economic and regional inequality. For students from rural backgrounds — who comprise a large and underrepresented portion of the vocational student body — equitable access to high-quality education and resources is a particular challenge. Such as a lack of digital infrastructure, limited awareness of diverse career opportunities, and financial constraints. Such findings are in line with Lin and Yeung (2023), who called for more inclusive educational policies and targeted support services to address the urban-rural divide. Vocational education in Jiangxi can serve as a means to drive upward mobility and regional development provided that these structural inequities are treated first.

Conclusion

The current study shows that the effectiveness of undergraduate vocational education programs in Jiangxi is contingent upon the interaction between curriculum relevance, teacher quality, industry engagement, and student involvement. Addressing these interrelated challenges through context-specific reforms and evidence-precise solutions will enable progressively widespread employment outcomes for graduates and support Jiangxi's long-term economic transformation agenda. The vocational institutes in Jiangxi therefore can adapt to the changing demands of learners and the labor markets by adopting a holistic and adaptive approach.

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