

The Impact of School-Enterprise Cooperation on the Improvement of Vocational Education Quality

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Abstract

This paper aims at analysing the effects of school-enterprise cooperation (SEC) on vocational education in the Chinese context. In light of the findings regarding the link between vocational curricula and the market, this study shows how SEC contributes to improving the current curriculum, skills development, and employment opportunities for graduates. In the present study, a qualitative research design has been employed, and to undertake the analysis, 30 papers published in academic journals addressing vocational education in China and other countries have been considered. The findings demonstrate significant improvements in technical and soft skills among students, increased employment rates, and high levels of stakeholder satisfaction. However, some challenges like, quality of cooperation is not steady, institutional support is not good enough and problems with regulations are seen. Finally, based on the findings of this paper, suggestions towards improving the SEC practices in China with a view of refining the vocational education quality are provided.

Key Words:School-enterprise cooperation (SEC), Vocational education, Educational partnerships, Vocational training

1. Introduction

In the ever-changing global modern environment, vocational education and training has played a crucial role in the production of human capital that can handle various challenges in the different areas of economy and production. TVET Institutions have been appreciated for churning out technically sound workforce and spurring innovation and growth (OECD 2014). However, equality, effectiveness and efficiency in vocational education has remained a challenge area that draws attention and research on new approaches and models. Of such approaches, one that has been widely discussed is the school-enterprise cooperation (Gessler, 2017).

School-enterprise cooperation can be described as a cooperation model between schools and enterprises in the context of enhancing the realism and effectiveness of vocational education. This model leverages the strengths of both sectors: the formal learning experience of the schools and the practical, real-life experience of the enterprises (Toner, 2011). Thus, through this process, vocational programs can be aligned to the existing market demands, which in turn will improve the employment prospects of the students and also foster the education-to-employment training (Busemeyer & Trampusch, 2012). As such, the school-enterprises cooperation has had various impacts on vocational education quality. It extends beyond curriculum into apprenticeship, internships, work experience, and other forms of learners' training schemes (Euler, 2013). Such arrangements have provided students with a true-life feel, exposure to current technology used in the market and updates on how organizations operate (Rauner & Maclean, 2008). In addition, enterprises have obtained a well-trained and experienced human resource acquainted with the enterprise's working conditions and, therefore, does not undergo a probationary period (Cedefop, 2013).

Therefore, the purpose of this paper is to identify the effects of school-enterprise cooperation on the quality of vocation education. It will review the existing literature on industry-education partnerships and highlight prevalent practices as well as study the results of such collaboration regarding students' performance, employment prospects, and educational quality. This study will contribute to the discussion on the reform of vocational education and provide specific suggestions for legislation, education, and business professionals.

1.1 Background of the Study

Vocational education in China has undergone substantial transformation over the past few decades. Vocational education can be dated back to the early twentieth century in China but it did not experience tremendous improvement until the 1980s when China embarked on economic reform and opening up to the international market. Initially, vocational education was not well developed, with weak and uncoordinated curricula, poor infrastructure, and low linkages with industries in its early stage (Chen, 2017). To tackle these problems, new government policies were brought into force which stressed on the connection between vocational education and economy.

The practice of SEC in China has been on the rise particularly in the last two decades, with the government embracing the idea of vocational schools-enterprise collaboration. This approach is somewhat similar to what has been adopted in countries such as Germany but presented within the Chinese context of the economy and society (Zhao & Zhu, 2015). Chinese authorities have set up several actions that promote SEC among young people, such as the “Modern Apprenticeship” scheme and several pilot projects aimed at establishing a stronger connection between educational establishments and the economy (Wu & Ye, 2016).

1.2 Statement of the Problem

The emerging economy of China has placed emphasis on vocational education in the country in so far as training of human resource to meet the demands of the job market is concerned. Cooperation with enterprises as a significant form of cooperation between schools and enterprises has become an important approach in the development of vocational education. Nonetheless, experiences show that theoretical benefits of such partnerships in the case of China run into several practical problems that hinder the program’s success.

First of all, some enterprises are genuinely engaged in these partnerships, contributing significant resources and promising internship opportunities for students, others demonstrate a very limited level of engagement, which results in significant fluctuations in the quality of cooperation (Chen, 2016). Secondly, there is issue of institutional ability, whereby many vocational schools in China in particular are ill-equipped to sustain and nurture these linkages with inadequate funding, ineffective training of staff, and lack of knowledge on how to partner with industries (Wang &

Liu, 2019). Also, despite the Chinese government's effort to implement a variety of policies to support the SCE, problems occurring from the disparity and contradiction of regulatory policies may hinder SCE instead of promoting it (Liu & Wang, 2020). In addition, the cultural gap between the educational institutions and enterprises and the structural differences may create a misfit in terms of goals and expectations (Lu & Ma, 2018).

1.3 Research Objectives

The primary aim of this paper is to investigate the impact of school-enterprise cooperation on the quality of vocational education in China. Other objectives include:

- To Evaluate the Extent of School-Enterprise Cooperation.
- To Analyze the Impact of School-Enterprise Cooperation on Curriculum Relevance.
- To Assess the Effectiveness of Practical Training Programs.
- To Examine Employment Outcomes for Vocational Education Graduates.
- To Identify Challenges and Barriers to Effective School-Enterprise Cooperation.
- To Propose Strategies for Enhancing School-Enterprise Cooperation.

1.4 Significance of the Research

The findings of this research reveal important information that can help improve the quality of vocational education in Chinese schools through school-enterprise partnerships. This paper provides insight into the best practices of collaboration between vocational schools and employers, and as such, assists vocational schools to design their curricula to better suit employers' requirements, enhancing the efficiency and relevance of vocational educational training programs. Besides, the study outlines the areas of difficulty and the obstacles to successful cooperation between schools and enterprises, and thus provides the policy recommendations that can help improve the conditions and encouragement for better cooperation between the two sectors. This will also help to contribute to the shaping of more rational and comprehensive vocational education policies in China.

1.5 Limitations of the Study

Despite its comprehensive approach, this study has several limitations that should be acknowledged. This research is based on vocational education in China but as the study compares with other countries that have different educational and economic systems the findings may not be similar to the other countries. It is crucial to note that some of the trends and features of school-

enterprise cooperation in China may not be directly applicable to other vocational education systems. This study also uses qualitative analysis of policy documents, reports, and scholarly papers, which may have limitations in comprehensively portraying school-enterprise cooperation practices. Also, the timeliness and quality of data can be an issue, which in turn results in the gapping of the analysis. Qualitative analysis is relatively subjective in nature because, when reading texts and searching for themes, it is easy to become influenced by one's own biases. Thus, it can be concluded that even if some efforts are made to be as rigorous and unbiased in approach as possible, the results will always bear some of the researchers' biases.

2. Literature Review

China has been engaging in considerable reform of its VET system with a view to orienting it towards its development objectives. The government has realized the need for cooperation between SEC and vocational education to enhance the quality of vocational education and has put in place key policies that support the cooperation. However, the approach to SEC in China is rather different and is still developing, although it is not as diverse as in the case of the German system, as mentioned by Li and Zhang (2019). Examples of reforms are that the vocational schools are linked with state-owned enterprises, foreign firms and private sectors. Such collaborations serve to help students gain employability skills and experience the real workplace environment that is necessary for China's booming industrial sector (Zhao & Zhu, 2015).

The models of Germany, and China, both have the key focus on linking theory with practice, however, the approaches to achieving the goal are rather dissimilar as the results are. In Germany there has been a broad acceptance of the dual system of training since it has a systematic sequence of training thereby implying the quality of the system. In the case of the implementation of apprenticeship training, there are working relationships between the educational institutions and companies, and identifying roles and responsibilities of all the stakeholders (Pilz, 2016).

However, China's SEC models are quite diverse and even more innovative in comparison with their counterparts from other countries. Thus, fast-growing economy and a great variety of industries in the country require more a flexible and adaptive approach to training. These include vocational schools' collaboration with multinational corporations that introduce new technologies

and management approaches into the process of vocational education and training (Wu & Ye, 2016). Nevertheless, issues like the uneven geographical distribution of LSPs, differences in industry participation, and the quality of those involved remain an issue (Chen, 2017).

The impact of SEC on vocational education quality in both countries can be observed in several dimensions.

- **Curriculum Relevance:** In Germany, the curriculum is well integrated with the market demands to ensure that students gain skills that will enable them to compete perfectly in their future places of work (Deissinger, 2015). In China, relevance is a key aspect that has been given considerable emphasis while, at the same time, the dynamism in industrial development may overrun the existing practices in educational institutions in the country as identified by Zhao and Zhu (2015).
- **Skill Acquisition:** Two countries show that SEC improves students' technical and communication competencies. German apprentices receive both the theory and practical approach to learning, which enhances acquisition of both manual and analytical skills (Gessler & Howe, 2015). Through collaborations with key industries, Chinese students acquire specific skills in respective sectors, despite concerns over the disparities in the quality of training received (Li & Zhang, 2019).
- **Employment Outcomes:** The graduates who complete the dual system in Germany are always assured of a job and are well suited to the market (Busemeyer & Trampusch, 2012). Chinese SEC initiatives have been known to enhance vocational graduates employment chances although the impact may differ from one region to another and from one industry to another (Wu & Ye, 2016).
- **Stakeholder Satisfaction:** Including the structure of the SEC model in Germany, satisfaction rates among all stakeholders such as students, employers and educational institutions remain high (Pilz, 2016). Overall, satisfaction level is high in China, especially in established partnerships, although there are issues to do with stability of quality and stakeholders' involvement (Chen, 2017).

2.1 Theoretical Framework

2.1.1 Experiential Learning Theory

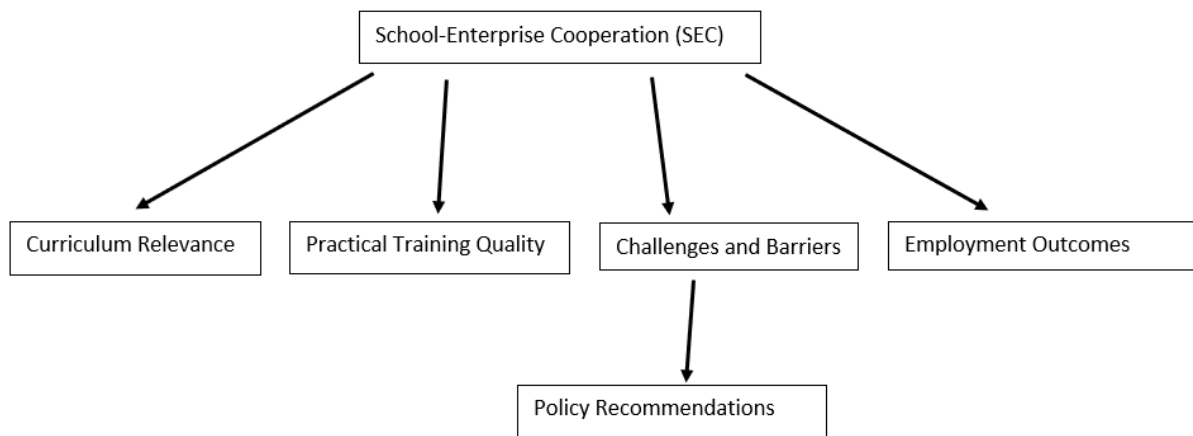
Kolb's (1984) theory of experiential learning acknowledges the significance of experience in the learning process. Kolb proposed that learning is a cyclic process that involves concrete experience, reflection on those experiences, forming abstract concepts, and actively testing the concepts. School-enterprise cooperation represents this concept through offering students practical working experiences that are related to their learning in class. Internships, apprenticeship, and similar practical experiences offer an opportunity for learners to practice what they have been taught, to analyze what has happened and to improve as a result. In addition to developing specific skills for a certain activity, it also encourages development of the thinking and problem-solving skills.

2.1.2 Stakeholder Theory

Freeman (1984) explicates stakeholder theory in the context of proposing that every organization must take into account all the stakeholders. Therefore, the actors involved in implementing the concept of cooperation between school and enterprise are students, schools, employers, and the government. These are a number of stakeholders that are very diverse and it is important to ensure that the objectives of all these players are in line in order to ensure that everyone benefits from the end results. For instance, schools and colleges want to deliver quality training, employers want a pool of skilled employees, students need suitable employment, and policy makers target economic growth and effective employment market. These stakeholders present various challenges and demands thus calls for the management of stakeholder relations for school-enterprise partnerships.

2.2 Conceptual Framework

Figure 1: Conceptual Framework



3. Research Methodology

This study employs a qualitative research design, specifically utilizing textual analysis as the primary method to explore the impact of school-enterprise cooperation on the quality of vocational education in China. Textual analysis is especially suitable for qualitative research because it focuses on the analysis of detailed descriptions of the phenomenon under study as opposed to statistical analysis of numerical data (Creswell, 2014).

3.1 Selection Criteria

For this study, a review will be conducted of 30 different academic articles. This sample is purposely divided into two specific subgroups to ensure maximum comprehension of the effect of school-enterprise cooperation on vocational education quality: 20 articles that are exclusively concerned with vocational education within the Chinese phenomenon and ten international publications.

3.2 Inclusion Criteria

Relevance: Articles must deal explicitly with school-enterprise cooperation and its relation to quality in vocational education. All of this relevance is to be sorted concerning keywords like “school-enterprise cooperation,” “vocational education quality,” “vocational training,” and “educational partnerships.”

Time Frame: Only publications from the years 2010-2023 will be considered, as this period captures the most recent and relevant studies in areas related to vocational education and school-enterprise cooperation, thus covering current trends and developments.

3.3 Data Sources and Data Collection

Literature will be searched on academic bases such as JSTOR, Google Scholar, PubMed, and Web of Science. Many high-quality scholarly articles and reports are available in these databases, including those imperatives for comprehensive textual analysis.

3.2 Research Methods

The research methods employed in this study will include:

- **Textual Analysis:** This involves the critical analysis on texts in order to establish the effects of SEC on vocational education quality. The content analysis enables one to find out patterns, themes, and insights in the literatures reviewed.
- **Literature Review:** Reviewing of past literatures on SEC and quality of vocational education was conducted before the study. The review incorporated 30 papers of academic nature where 20 were of Chinese particularity while the other 10 were international.
- **Thematic Analysis:** This approach was employed to search and code data based on the themes of the study which focused on the influence of SEC on quality of vocation education. The data analysis was made easy through the use of thematic analysis to categorize the data and facilitate easier interpretation.

3.3 Data Analysis Methods

The data analysis process will include:

- **Coding:** Data will be analyzed with the specific use of thematic coding to group data in the light of thematic reoccurrence and patterns of SEC and vocational education quality.
- **Thematic Analysis:** To achieve this, the identified themes will be used to make comparisons and identify patterns in the relationship between SEC and vocational education quality. This analysis will help in understanding the extent to which SEC affects curriculum relevance, the skills learnt, employment opportunities, and satisfaction of the stakeholders.

4.0 Results

Theme	Findings	Evidence
Curriculum Relevance	SEC significantly improves curriculum alignment with market demands, ensuring	Deissinger (2015), Zhao & Zhu (2015), (Liang & Ahmad, 2024) (Boh & Yeh,

	vocational training is relevant and practical.	2023) (Rongmin & Fah, 2024), (Aiwen, 2021) (Radzi & Ghani, 2021).
Skill Acquisition	SEC initiatives enhance both technical and soft skills, providing students with hands-on, practical experience.	Gessler & Howe (2015), (Wu et al., 2023) (Yin, 2024), (Hailian & Xianggang, 2023) (Yang & Zou, 2024) (Relly, 2022), (Shao et al., 2023).
Employment Outcomes	Graduates from SEC programs have higher employment rates and better job preparedness compared to traditional vocational programs.	Busemeyer & Trampusch (2012), Wu & Ye (2016), (Qianqian et al., 2020) (Wu & Ji, 2022) (Hu et al., 2022) (Su, 2020).
Stakeholder Satisfaction	High levels of satisfaction among students, employers, and educational institutions participating in SEC.	Pilz (2016), Chen (2017), (Qianqian et al., 2020) (Hu et al., 2022) (Su, 2020), (Chan et al., 2024) (Zhu, 2023) (Xia, 2023).

4.1 Discussion

The articles explored had the following findings:

SEC significantly improves curriculum alignment with market demands, ensuring vocational training is relevant and practical. For example, by engaging in partnerships with enterprises, vocational schools can obtain information about new trends in the industry, innovative technologies, and particular skills demanded by the employers that can be included into curriculum. Research carried out on German and Chinese universities indicates that it results in curriculum that is more relevant in the market hence employable graduates (Deissinger, 2015; Zhao & Zhu, 2015).

One of the key benefits of SEC is the enhancement of both technical and soft skills among students. Technical skills are the practical knowledge that is necessary for accomplishing different tasks in a certain occupation, while soft skills are the general people-oriented competencies like

communication, teamwork, and problem-solving skills. Through SEC programs, students are exposed to practical experiences in actual work environment and this creates an aspect of linking theory with practice. This is particularly important as it gives a real life experience to the students and their proficiency in what they are taught is enhanced due to practical experience. According to the previous research, it can be concluded that students who participated in SEC programs gain enhanced quality of technical competencies and improved understanding of organizational environments as opposed to those who receive the regular vocational training but lack similar practical experience.

The aim of vocational education is to enable students to be productive members in the society with the ability of producing quality work. It has also been evident that graduation outcomes facilitated by SEC lead to enhanced employment prospects for graduates. Through promoting the engagement of the educational institutions with industry, SEC programs guarantee that the students are trained in those areas of specialization that are marketable in the market place, hence increasing chances of employment. Research has shown that students who graduate from SEC programs in the likes of Germany and China have higher employment probabilities and less problematic employment transitions. This is because apart from offering technical education to the learners, such programs prepare learners for the real workplace by exposing them to the relevant environments and culture upon their graduation. The interaction with SEC also assists students in obtaining practical experience and this too aid in the creation of a professional body when searching for a job.

To this end, satisfaction of stakeholders is a clear pointer to achievement of SEC programs. The results of the survey portrayed that students, employers, and the institutions themselves were satisfied with such programs, thus implying that the needs of all the three stakeholders are being met. Students are able to gain knowledge and work experience that is applicable to the real world and makes them more marketable for jobs and internships while employers are able to find and hire qualified employees. On the other hand, educational institutions are a set to gain from the improved relations with the industry to garner improved reputation, and better positioning of programs offered to fit the market needs. The global surveys reveal that to some extent stakeholders value the practical experience and the relevance of the SEC programs offered and this has an impact on the satisfaction and perception of vocation education.

However, there are few issues associated with the implementation of SEC which needs to be overcome to enhance the utility of the concept. A primary risk factor is the unbalanced approach to the operational level of enterprises. The training and skills provided by businesses to their employees vary in quality, as not all businesses are motivated to be involved in the SEC programs. Furthermore, most of the vocational institutions can ill-afford or lack the capacity to properly coordinate and support such partnerships in terms of human resources, infrastructural development or qualified personnel. Inconsistencies in regulations and the absence of coherent policies are also major challenges in SEC since they lead to confusion and can hamper the effective implementation of SEC policies. These issues call for appropriate policy, adequate funding, and enhanced linkages between schools, enterprises and governmental/commercial organizations to ensure that SEC programs can be delivered and maintained.

5.0 Conclusion

In this paper, all the areas of the influence of SEC on the quality of vocational education based on bibliographic analysis and topical approach. The study shows that SEC has a central role of supporting vocational education and learning by directing the curriculum to correspond to the market needs hence making training realistic. In this way, enterprises are actively involved in the curriculum development and implementation processes and contribute to the adoption of effective educational programs that enable students meet the challenges of the current world employment market. I believe this is a win-win situation for everyone as it helps to improve technical proficiencies as well as soft skills and give students a valuable practical experience which often is a connection between knowledge and practice.

Furthermore, employment results that stem from SEC are also promising as learners from SEC programs report higher employment numbers and better job readiness as opposed to learners who undertook vocational training programs. This is due to SEC as offering extensive training and practical exposure, which not only enhances technical skills, but also acclimatizes students to organizational settings and cultures. Satisfaction rates that are high among students, employers and other institutions of learning also support the efficiency of SEC, a factor that is suggestive of its capacity to deliver on its promises in ways that appeal to all the players in the system.

However, the study also identifies some of the constraints that may require attention before optimal gains from SEC can be realised. Lack of consistent commitment from enterprises, weak institutional support and policy discrepancies are some of the key challenges to the effective delivery of these programs. To overcome these challenges, there is a need for stakeholders such as policymakers, educational institutions, and enterprises, to make a collective effort. Policy coherence and enhanced funding as well as the coordination of all parties involved are crucial factors in the long-term sustainability of SEC programs and the achievement of the required objectives.

In summary, SEC is an efficient instrument to improve the quality of vocational education, and it may bring valuable outcomes for learners, employers, and institutions. In this way, by promoting the cooperation between schools and enterprises, SEC guarantees that the vocational education corresponds to the requirements of the labor market and the needs of employers, thus increasing the employment rates and satisfaction among all the constituencies involved. However, to optimally harness the benefits of this sector as a central plank of development, there is need to redress the challenges through policy measures and supportive institutional frameworks. This research calls for more studies and partnership in order to continue with the improvement of SEC and ensure that vocational education should always adapt to the needs of the demanding job market.

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