STRATEGY OF VOCATIONAL EDUCATION ADAPTING TO SOCIAL AND ECONOMIC DEVELOPMENT

Hejun Zhao
Sumy National Agrarian University, Ukraine
Xinxiang Vocational and Technical College, China
ORCID: https://orcid.org/0000-0001-8825-4803

Nataliya Stoyanets
Sumy National Agrarian University, Ukraine
ORCID: https://orcid.org/0000-0002-7526-6570

Lijuan Cui
Sumy National Agrarian University, Ukraine
Henan Institute of Science and Technology, China
ORCID: https://orcid.org/0000-0002-8751-9184

Guohou Li
Henan Institute of Science and Technology, China
ORCID: https://orcid.org/0000-0003-1410-5076

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**Purpose.** By studying the relationship between vocational education and social and economic development, this paper further clarifies the internal relationship between them, and then puts forward the strategies for vocational education to adapt to social and economic development.

**Results.** Through the investigation and analysis of the problems between vocational education and socio-economic development, we conclude that the strategies to enhance the ability of vocational education to adapt to socio-economic development are: firstly, we should strengthen the reform of vocational education serving socio-economic development, improve the vocational education and training system, pay attention to the cultivation of students’ key employability, and actively and deeply integrate the development of regional economy. Secondly, we should carefully analyze the uncoordinated and incompatible problems between vocational education and economic development, and solve them as soon as possible. Finally, the government should evaluate the ability of vocational education to promote social and economic development, strengthen the macro control of vocational education, give play to the important role of enterprises in the process of vocational education, introduce big data management, and set a good direction for vocational education, so as to support the sustained and rapid development and progress of the economy.

**Scientific novelty.** This paper carefully analyzes the related problems between vocational education and social and economic development. In view of the combing and analysis of these problems, this paper obtains the relevant strategies to enhance the ability of vocational education to adapt to social and economic development, and points out the direction for the cultivation of technical and skilled talents that that will promote economic development.

**Practical value.** Through the investigation and analysis of the relationship between vocational education and social and economic development, we find that there are some uncoordinated and
incompatible problems between the current situation of vocational education and economic growth. By carefully combing and analyzing these problems, we can establish the direction of vocational education reform and development, and combined with the development trend of modern economic system, draw the strategy of how vocational education can adapt to social and economic development. 

**Key words:** vocational education, sustainable development, reform, strategy, China.

**Introduction.** This paper analyzes the interactive relationship between vocational education and socio-economic development, finds out that the current construction of vocational education system needs to be further improved, there is a disconnect between professional setting and the needs of market economy, the talent training mode can not fully meet the needs of rapid economic development, and the combination of practical teaching and market demand of vocational education is too loose. Social recognition of technical and skilled talents is low, and the quantity and quality of talent training can not well meet the needs of rapid economic growth. And based on the above outstanding problems, it puts forward six strategies, including vocational education reform, strengthening government regulation, cultivating students’ key employability, deep integration of vocational education and economic development, and evaluation of the role of vocational education in promoting economic growth. In order to solve the existing problems in a timely manner and help further improve the economic level.

**Review of literature.** All the leading economies in the world attach great importance to the development of vocational education. Research shows that there is a close relationship between vocational education and economic development [1–22]. High quality and large-scale vocational education provides a large number of technical and skilled talents for social and economic development, especially the development of higher vocational education, provides more high-end technical and skilled talents for the industrial revolution, provides strong human resources support for the transformation of national economic structure and stepping into high-end manufacturing industry, and plays a strong role in promoting economic development. Vocational education and social economy develop together, but in the development process of vocational education, there are still some problems that can not meet the needs of economic and social progress, which is mainly reflected in the contribution of talents trained by vocational education to social and economic development. Carefully combing and analyzing the existing problems and putting forward solutions to these problems are important research to ensure that vocational education can better promote social and economic development. It will put forward new requirements for the development of vocational education and provide better human resources support for social and economic progress.

As we all know, vocational education can provide a wide range of human resources support for a country’s economic and social development. Especially for a large manufacturing country, we must attach great importance to the important role of technical and skilled personnel training in social and economic construction, it emphasizes that vocational education should closely cooperate with the needs of social and economic development, and let vocational education undertake the task of training
technical and skilled talents [1]. Because vocational education trains all kinds of technical and skilled talents, such talents play a vital role in all fields of social and economic development [2]. At present, the world economic development has entered a new pattern, and the industrial upgrading and economic structure adjustment are accelerating, which makes the demand for technical and skilled talents in all walks of life more and more urgent. The economic development needs a large number of talents with superb technology, theory and design ability. Only in this way can the industrial development keep up with the pace of world economic reform [3]. In this transformation, vocational education increasingly shows its important role in economic development and progress. At the same time, it also provides a rare opportunity for the progress and development of vocational education [4].

Materials and methods. By studying the relationship between vocational education and social and economic development, this paper further clarifies the internal relationship between them, and then puts forward the strategies for vocational education to adapt to social and economic development.

The research methods used in this study are mainly literature method, investigation method and special research method. By studying the interaction between vocational education and socio-economic development, we can find the essential attribute of vocational education to improve socio-economic development, and then put forward relevant strategies to improve the ability of vocational education to promote socio-economic development.

Results and discussion. In order to deeply explore the mutual promotion between vocational education and socio-economic development, and put forward the strategies for vocational education to continuously promote socio-economic development, we make the following research.

1. Vocational education develops in coordination with social economy. We believe that social and economic development is not simple, it is related to many factors. Among them, the relationship between vocational education and social and economic development is not one-way, but a symbiotic relationship of mutual benefit [5].

The economic development of a region is inseparable from its production factor resources, education resources and market resources. As an important part of educational resources, vocational education undertakes the important division of labor to put theoretical knowledge into practice. It is an important educational branch to teach people to master the ability to finally transform resources into economic benefits [6]. In fact, we all know that all economically developed countries must have a high level of vocational education. For example, Germany’s “dual system” and action oriented vocational education curriculum model make German manufacturing famous all over the world, promote German economic development and stand in the first camp of the world economy. In addition, TAFE in Australia has promoted the development of vocational education. The government has continuously strengthened the macro-control of vocational education, so that the development of vocational education can
closely follow the pace of social and economic development and coordinate the development of economy through macro management and guidance. In the UK, BTEC Teaching mode also actively changes the management system of vocational education to make the coordinated development of economy and vocational education, adapt this development to the needs of the times and make it in line with the national economic development characteristics [7].

In China, in order to adapt to the rapidly changing economic and industrial situation and better promote the development of the national economy, the state strongly supports the development of vocational education and has issued more guidance on the development of vocational education, emphasizing the precise regulation and guidance of the operation mechanism of vocational education at the macro level. As can be seen from Fig. 1, vocational education and economic development are interrelated. China’s economic development has been supported by large-scale vocational education, which needs to cultivate skilled talents in line with social and economic development. China has an average of 28 million students studying in various vocational schools every year.

![Graph showing the number of students in various vocational schools and GDP in China from 2005 to 2020.](image)

**Fig. 1. Number of students in various vocational schools and GDP in China from 2005 to 2020**

*Source:* built by the authors on the basis “Statistical Yearbook of the National Bureau of statistics of China”.

These talents have laid a solid foundation for the development of human resources and injected strong impetus into the country’s economic development. In particular, the steady growth of the scale of higher vocational education has provided a good supply of high-end technical and skilled talents in China, and provided strong human resources support for the transformation of the national economic structure and entering the high-end manufacturing industry. Conversely, the economic scale of up to 114 trillion also greatly supports the development of vocational education, which is a
strong economic foundation and important support for the high-quality development of vocational education. In this way, a virtuous circle between the two has been formed and vocational education has been promoted to a higher level [8].

The above reflects the coordinated development relationship between socio-economic development and vocational education. They promote and improve each other, providing sufficient power for the improvement of economic level.

2. Existing problems. In the process of mutual promotion and common development of vocational education and social economy, we find that there are still all problems. The existence of these problems makes the achievements of vocational education not fully consistent with the needs of social and economic growth, which is certainly not conducive to economic development. These problems mainly exist in:

2.1. The vocational education system needs to be further improved. Vocational education system refers to the system of vocational education, such as school running purpose, training mode and training level. At present, the training level of Vocational Education in mainstream countries is mainly composed of secondary vocational education and higher vocational education. The training mode also mainly adopts the mode of combination of work and study and on-the-job practice to train technical and skilled talents for the hot spots of regional economic development [9].

However, the vocational education system in many countries and regions is relatively single and closed, which can not provide sufficient and applicable technical and skilled talents for economic development. For example, some countries and regions divide vocational education into low-level education, and the level of vocational education is only dominated by secondary vocational education, and only develop some low-level jobs with low technical content. In this way, it is obviously unable to meet the needs of rapid economic growth [10]. Because we know that the more high-end products, the stronger the technology and ability required by practitioners, and the training level of secondary vocational education is relatively low, which obviously can not meet the needs of factory production for practitioners with high technology and high ability [11]. In China, the statistics at the end of 2020 show that the demand and supply ratio of highly skilled talents will remain more than twice for a long time, and the gap of highly skilled talents will reach 30 million by 2025, which will increase regional talent competition, increase human resource costs, and have a negative impact on economic growth.

2.2. The specialty setting of vocational education is partially divorced from the demand of market economy. For a long time, the goal of employment oriented vocational education has solidified the thoughts of vocational educators.

The specialty setting of vocational education institutions has not established a dynamic adjustment and renewal mechanism guided by industrial demand, enterprise demand and talent demand. The existing curriculum content is not updated in time, lags behind the current situation of rapid iterative development of the industry, and cannot meet the social needs of rapid change [10; 12].

Many people believe that as long as the talents trained by vocational education
are in demand in the market, they are good vocational education and can fully integrate into the market economy. Therefore, in the important link of specialty setting, all kinds of vocational schools often have problems such as repeated and outdated specialty setting, excessive superposition of school running scale and so on. In addition, vocational schools lack the ability to conduct scientific research and evaluation on the supply-demand relationship of human resources market, the specialty setting of vocational education institutions has not established a dynamic adjustment and updating mechanism guided by industrial demand, enterprise demand and talent demand, therefore, the specialty setting often lags behind the current situation of industry development and cannot meet the social needs of rapid change [13].

Another situation is that because the government gives vocational schools the autonomy to run schools, schools only set up majors according to their own understanding of the talent market, lacking the guidance of policy authority. In this way, it will lead to two problems: first, because the specialty setting of each vocational school is self-determined, the overlapping training scale of the same specialty of each vocational school may be larger or smaller than the real demand of the market, resulting in the excess or shortage of trained talents; on the other hand, this practice also makes the lag of talent training in vocational education more obvious. If vocational schools begin to train such talents when there is a new demand in the market, because there is a certain training cycle, the talent market will often face the situation of no one available [14].

2.3. The talent training mode of vocational education can not fully meet the needs of rapid economic development. Let’s summarize a feature of the current social and economic development, which is “rapid change”. Although the teaching mode of vocational education has changed greatly compared with the past, it is still difficult to adapt to the rapid changes of market economy. For example, the teaching mode of combining work and study. The combination of work and study is a very important and effective teaching mode in modern vocational education. However, due to the rapid change of teaching content, the talent training scheme, teaching staff, teaching methods and teaching objects of vocational schools must also be changed and adjusted [15]. If the adjustment is not in place, the teaching content will be disconnected from the actual market demand, so that the teaching quality will be affected and the teaching objectives and requirements will not be achieved.

2.4. The combination of practical teaching and market demand of vocational education is too loose. At present, the practical teaching of Vocational Education in most countries and regions also widely relies on the investment of schools and governments to build practical learning bases for students to learn and train professional skills. The advantage of this approach is that it can flexibly carry out practical teaching according to the arrangement of the school. The disadvantage is that this practical teaching is very different from the real production environment of factories and enterprises. The skills learned by students in school can not be fully used in factories. For regional economic development, vocational education must be
combined with local actual needs, explore teaching characteristics consistent with actual needs, and cultivate human resources that can make rapid and direct contributions to regional economic development [16].

In recent years, although there have been some new practical teaching modes, such as school enterprise cooperation, new apprenticeship, etc., factories often cannot give priority to cooperating with school teaching because they undertake production tasks and need to assess profits. This leads to the fact that even if students participate in practical training in the factory, they cannot obtain satisfactory learning results.

2.5. Society’s recognition of technical and skilled talents is low. If the society’s recognition of technical and skilled talents is low, it will greatly reduce people’s enthusiasm to choose vocational education. If vocational education becomes a passive choice of parents and students, the quality of students’ source of vocational education will not be guaranteed, which will affect the quality of vocational education. Especially for some majors with high technical content, the poor quality of students will seriously hinder the development of normal teaching, greatly reduce the teaching quality and fail to achieve the due teaching quality [17].

The social recognition of a certain kind of talents is mainly reflected in the reputation and treatment of such talents in the society [11; 18]. In China, people often classify talents into five categories: rich class, gold collar class, white collar class, blue collar class and gray collar class. Of course, this classification method is closely related to the income status and jobs of this class. The vast majority of technical and skilled talents are in the blue collar class and gray collar class. They are mainly engaged in relevant administrative services, social production services, life services, production and manufacturing and other jobs. According to different positions, the employees of this class have an annual income of between 60000 and 90000 RMB, which is a big gap compared with the income of other classes. Table 1 shows the average annual wages of employees in different positions in China in 2020. Obviously, from the data in the table, vocational education is not the best choice in people’s minds.

### Table 1

| Region         | Employees of enterprises above designated size | Middle level and above managers | Professional technicians | Clerks | Social production service and life service personnel | Manufacturing and related personnel |
|----------------|-----------------------------------------------|--------------------------------|--------------------------|--------|----------------------------------------------------|-----------------------------------|
| Eastern region | 88284                                         | 191577                         | 129052                   | 84787  | 67652                                              | 65241                             |
| Central region | 64210                                         | 117426                         | 81705                    | 58276  | 50873                                              | 56302                             |
| Western region | 72086                                         | 137805                         | 94913                    | 64525  | 55665                                              | 62250                             |
| Northern region| 70272                                         | 134181                         | 83374                    | 68387  | 54769                                              | 61305                             |
| Average        | 73713                                         | 145247                         | 97261                    | 68994  | 57240                                              | 61275                             |

Source: formed by the authors on the basis “Statistical Yearbook of the National Bureau of statistics of China”.

2.6. The quantity and quality of vocational education personnel training can not
meet the needs of rapid economic growth. With industrial upgrading and economic development, the demand for technical and skilled talents is becoming stronger and stronger. Especially some highly skilled talents and service talents. According to the estimation of China’s Ministry of labor and social security, by 2025, the gap of high skilled talents in China will reach 30 million. Of course, this lack of quantity will directly affect the development of China’s economy.

In addition, due to insufficient funding, insufficient supporting policies and regulations, declining quality of students, and inflexible school-running mechanisms, all of which have directly led to a decrease in the quality of vocational education training. Especially for some high-skilled positions, some students cannot adapt to the job requirements immediately after graduation, and still need 3 to 6 months of job adaptation training to be competent for the job requirements, which also increases the production cost of enterprises and delays the rhythm of economic development.

Through investigation and analysis, we know that there are problems of incoordination and incompatibility between the development of vocational education and the promotion of economic growth. Careful sorting out and analysis of these issues enables us to clearly study the direction of vocational education reform and development, and combine with the development of the modern economic system to obtain strategies for vocational education to adapt to social and economic development.

Conclusions. Vocational education shoulders the heavy responsibility of cultivating technical and skilled talents. Therefore, this type of education is more closely related to the social economy. It is of great significance to establish a vocational education system that adapts to social and economic development. Based on the above analysis, we propose the following strategies to enhance vocational education to adapt to social and economic development:

1. Speed up the reform of vocational education to serve social and economic development. First of all, we should solidly promote the construction of modern vocational education system and actively adapt to the needs of economic development. In terms of specialty setting, training mode, curriculum system and teaching content, we should track the forefront of market application, build a vocational education based on improving students’ working ability and pay attention to cultivating students’ innovative spirit, innovative consciousness and entrepreneurial ability, strive to develop new vocational training in line with industrial policies and regional economic hotspots [19]. According to the needs and characteristics of the industry, we should develop the training mode of professional degree postgraduates and appropriately expand the training scale of professional degree masters and doctors. Actively establish a deep school enterprise cooperation mode, constantly improve students’ professional and technical practical skills, deeply integrate vocational education into social and economic construction projects, promote mutual promotion and coordinated development between the two, and provide strong human resources guarantee for social and economic development [20].

2. Strengthen the government’s macro control over vocational education,
introduce big data management, and set a good direction for vocational education.

Use big data technology to strengthen the accurate management of the demand for technical and skilled posts, and provide macro guidance on the enrollment scale and specialty according to the macro industrial policies and regional economic development characteristics, so as to ensure the full utilization of valuable vocational education resources and maximize the role of serving social and economic development.

3. Seriously analyze and solve the problem of incongruity between vocational education and economic development, and actively create a favorable environment suitable for the development of vocational education to support the sustained and rapid development and progress of the economy.

4. Vocational education should actively and deeply integrate the development of regional economy and complement each other’s advantages. According to the regional industrial situation and development direction, vocational schools should actively connect with the needs of enterprises, carry out in-depth school-enterprise cooperation and counterpart assistance work, help enterprises solve problems encountered in the process of production and scientific research, and strengthen the interaction between schools and enterprises, complement each other’s advantages, continuously improve the teaching quality of vocational education, and ensure that the labor force flowing into the human resources market is of high quality [21].

5. Vocational education should focus on the cultivation of students’ key employability. All types of vocational schools should, according to the needs of different regions and different types of jobs, strive to cultivate the key employability of students, so that students can be successfully employed after graduation, and can play a role in the employment positions as soon as possible [22].

6. Evaluate the ability of vocational education to promote social and economic development, and implement the key role of enterprises in the process of vocational education. By means of evaluation, we can improve the ability of vocational schools to serve social and economic development, train high-quality workers and skilled talents for the front line, and tilt the focus of preferential policies for running schools to vocational schools with good evaluation results, so as to take the lead and demonstrate the effect. At the same time, it is also necessary to evaluate the role of enterprises in the process of vocational education, formulate relevant incentive policies, encourage enterprises to actively participate in the process of talent training, so that vocational schools and enterprises can be closely integrated into the whole process of vocational education and training, and cultivate technical and skilled talents really needed by social and economic development.

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