The development of vocational education in modern China may be traced through four stages. The progress made during the experimental stage (1949-1965) was largely reversed during the Cultural Revolution (1966-1976), at which time many secondary technical and vocational high schools were closed. The period 1977-1984 marked a recovery stage when many secondary technical schools were reorganized, reopened, and expanded to repair the damage of the Cultural Revolution. Around 1985 policymakers finally recognized the potential value of vocational education and worked to achieve a 50:50 mix of general and vocational education at the senior high school level by 1990. The growth of vocational schools soon outpaced the development of effective vocational education strategies, and policymakers were forced to reassess vocational education in light of China's economic and educational reform. Vocational education must be redefined as education aimed at preparing people for working life. Strong government leadership in vocational education must be continued. Vocational education must be based on the needs of the community, and it must allow maximum individual choices. Education is undergoing major reform in both China and the United States. Exchange of ideas among vocational educators of both countries can only improve the profession. (Contains 19 references.) (MN)
Vocationalism and Social efficacy: The Chinese model

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Abstract

This study examined the roles of vocational education in China. Some historical, social, and economic factors related to the progress of vocational education were discussed. Three strategies were proposed in the future development of vocational education in China. Vocational education must not only contribute to building a strong economy but to empower individuals being better decision makers in a democratic society. Attempts were also made to compare the vocational education systems between China and the United States.
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VOCATIONALISM AND SOCIAL EFFICACY: THE CHINESE MODEL

Vocational education in China currently serves more than 6 million students. Reform of the Chinese educational system has a high priority to vocationalize its secondary education. According to the decision on "The Reform of China's Educational Structure" in 1985, a goal was set to reach a 50-50 mix of general education and vocational education at the senior high school level by the year 1990. From all the indications, this goal was reached successfully ("New calls", 1993).

In the past, little was known about the Chinese vocational education system in the West. It wasn't until recent years that a few reports were published to unveil the policy and practice of the Chinese system (Bott, 1988; Copper, 1988; Hawkins, 1988; Lewin & Xu, 1989; Tsang, 1990; Yang, 1990). The Chinese model of vocational education received high remarks for its economic, cultural, as well as social values (Yang, 1990). However, some questions were also raised on its program quality and economic efficiency (Liu, 1991; Tsang, 1991; Wang, Yang, Zhang, & Yang, 1991).

The goal of education in China was officially defined as "serving for the socialist economic construction" (Li, 1990). Such definition reflected a close linkage between education and the nation's economy. Because vocational education has its virtue as a viable alternative to develop a productive work force, the Chinese policy-makers turned to rely heavily on vocational education to build a strong national economy. In addition, vocationalizing secondary education may have some other potential benefits. Tsang (1991) stated that
although the structural reform of secondary education is justified largely in economic terms, the desire of Chinese policy-makers to use vocational-technical education for social stratification and social control is an equally (if not more) important driving force for reform. (P. 79)

This study attempted to examine the roles of vocational education in China. There were four objectives of the study: (1) to examine the historical development of vocational education in China; (2) to examine the foundations of the vocational education system; (3) to develop some strategies for improving program quality, and (4) to compare the vocational education systems between China and the United States. Hopefully, this study could revamp our thinking on the relationships between education and work and between the educational democracy and social efficiency.

A Theoretical Framework

There were two major schools of philosophy regarding vocational education in the United States along its course of development -- the social efficiency theories of David Snedden and Charles Prosser and the social democracy theory of John Dewey (Wirth, 1974; Camp, 1983; Miller, 1990). "The educational plan of Snedden and Prosser rested on society's sense of what we required to be successful in the work force, whether it be the home, farm, business, or industry" (Miller, 1990). The social efficiency theories were the primary driving force pushing the passage of the landmark Smith-Hughes Act of 1917. Some of its impacts on American vocational education could be found in the current practice, including the existence of the dual school systems and the student "tracks" (Camp, 1983).
John Dewey believed that "vocational education was a means to induce changes that would improve all of education", and "occupations were central to life, and thus should be central to educational activity" (Miller, 1990). The impact of Dewey's thoughts on American vocational education has increased in the last few decades since the passage of the 1963 Vocational Education Act. In spite of points of agreement concerning the importance of vocational education, there was considerable argument between the Dewey and Snedden-Prosser camps.

In China, the policy-makers finally realized the potential values of vocational education in the economic build-up. But they have not developed effective strategies to direct its future progress. Many practitioners in the field had to use their limited imaginations to guide practices because the goals of vocational education were not clear to them. It's the time to think clearly and to develop a philosophy of vocational education in China. New approaches must be developed to insure both the healthy vocational life of individuals and economic advancement of the society.

The Historical Development of Vocational Education in China

A review of the historic development of vocational education in China would be helpful to understand its current status. The earliest attempts to develop vocational education in modern China were dated 1917. The Chinese Association of Vocational Education (CAVE), a civilian organization consisted of prominent educators and business leaders, was established in Shanghai in that year (Chen, 1979; Liu, Dong, and Zhu, 1986).

The two primary purposes of CAVE were "to popularize and improve vocational education; and to reform general education so that it can better
prepare people for life and facilitate the improvement of vocations" (Chen, p. 292). CAVE proposed new school curricula which would enable students to develop vocational appreciation at the elementary level and to enter parallel vocational programs at the secondary level. The organization published a journal Education and Vocation and established a school named "The Chinese Vocational School" (Liu, Dong, & Zhu, 1986).

In 1931, the nationalist government passed the Vocational Education Act which created a separate vocational education system consisted of schools at both the junior and senior high levels (Liu, Dong, & Zhu, 1986). Unfortunately, social instability at the time did not allow a major development of vocational education in China (Chen, 1979).

Since the founding of the People's Republic of China in 1949, the development of vocational education has experienced several stages. The first could be called the experimental stage (1949-1965). One characteristic during this period was the coexistence of the old types of schools before the communist revolution and the newly established ones. Many secondary professional schools and secondary technical schools were established to educate technicians and skilled workers. There was a heavy influence of the Soviet vocational education models. The Communist educational reform during that time was mainly an experiment. A pragmatic approach was dominant in educational practices.

The second stage was during the Cultural Revolution (1966-1976). The goal of education was defined to raise communist political consciousness but not to develop academic and professional skills. The radical "leftist" approach added courses of Marxist theories at all school levels and lowered the academic and professional standards. Field trips to the work place became
a significant component of the secondary curricula, which aimed at raising political consciousness instead of learning useful skills. During this period, many secondary technical schools and vocational high schools were closed. A dogmatic Marxist idealism did not tolerate any creative approaches.

The third period was the recovery stage (1977-1984). Major efforts were made to normalize education by repairing the damage caused by the Cultural Revolution. There was a strong emphasis on academic education even in vocational education programs. Most of the secondary technical schools were reorganized and reopened. In the early 1980s, the scale of vocational education had exceeded that before the Cultural Revolution. Still, there were no major breakthroughs to prioritize vocational education in the educational system. A mixture of philosophies co-existed throughout this stage.

The fourth period has been the reconstruction stage (1985-current). Two landmark events occurred in the mid-1980s. One was the decision on "The Reform of China's Educational Structure" in 1985 issued by the Communist Party of China (CPC). Another was the passage of the "Law of Compulsory Education" in 1986 by the National People's Congress (Lewin & Xu, 1989).

The potential values of vocational education were fully recognized by the policy-makers. One dramatic development was the transformation of many regular senior high schools into vocational high schools. As a result, vocational education has become an equal partner in secondary education in terms of the number of students enrolled. The reconstructionalist views of reformers brought new hopes for the life and future of vocational education.

However, several studies criticized the poor quality of many vocational education programs (Liu, 1991; Tsang, 1991; Wang, Yang, Zhang, & Yang, 1991). Vocational education need to build a positive image in the society. A new way
of thinking is needed to sharpen its future direction as the country is moving toward a market economy.

The Foundations of Chinese Vocational Education

Several studies have described the vocational education system in China (Yang, 1990; Tsang, 1991; Bott, 1988). A main purpose of vocational education in China was to meet the manpower shortages of skilled technicians and skilled workers (Lewin & Xu, 1989). Vocational education programs were offered in the secondary professional schools, the secondary technical schools, the vocational high schools, etc. (Yang, 1991).

There were great variations among the vocational education programs. Generally, enrollments to the vocational education programs were quite competitive except for some vocational high schools. The employment opportunity was almost guaranteed for graduates from the secondary professional schools and for most of those from the secondary technical schools. Only a few programs in the vocational high schools would guarantee employment opportunities.

The development of vocational education in the 1980s was in response to the new structure of the nation's economy. As the process of industrialization accelerated in the 1980s, the demands for technicians and skilled workers became much greater. On the other hand, only a very small percentage of high school graduates could enter colleges and universities. There was a strong feeling that the old system of secondary education could no longer meet the needs of the society.

The decision on developing vocational education was a consensus among the poly-makers. Yet, the rationale for the goal of reaching a 50-50 match of
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general education and vocation by 1990 was not supported by any studies. There were hardly any good solutions to the emerging problems in recent years. No legislation has been passed to ensure the long-term stability of vocational education. The growth of vocational schools outpaced the development of effective strategies. In establishing a solid foundation of vocational education in China, the policy-makers must fully consider its unique cultural and social environment.

The influence of traditional education

Education in China has been seen as a way of achieving wisdom, maintaining the family structure, establishing the law, and providing for social and economic concerns. The Chinese society was heavily influenced by Confucianism and treasured the values of education. As an ancient philosophy, however, Confucianist education was generally confined to the study of liberal arts, especially the classics. Subjects of practical arts were hardly being studied in the traditional schools in China.

It was only in the last forty years that schooling became popularized in the society. In the past, being educated meant to be prepared to climb in the bureaucratic hierarchies. The educational elitism believed the separation of minds from hands. They favored the exclusion of vocational subjects in school curricula. As a result, most high school students graduated without being well prepared either for life or for earning a living.

Current views of education believed that it should be primarily concerned with social and vocational skills (Ozmon & Craver, 1990). A wide gap must be crossed to accept this new concept for most people. It is difficult to eradicate the deep-rooted thoughts of elitism even in a modern
The economic reform

The reform policy has resulted in great social and economic changes in China in the last decade. The policy of central planning by the government was gradually replaced by the mechanism of market economy. In recent years, private businesses and joint adventures with foreign investments have brought new blood to the economic vessels. The business leaders have demanded a highly skillful work force to compete in the international and domestic markets.

The lack of engineers, technicians, and skilled workers has paralyzed many industries in China. A study indicated that engineers and technicians in the state-run enterprises only consisted of about 5 percent among all its employees (Liu, Dong, & Zhu, 1986). Besides, the ratio of engineers to technicians ranged from 3:1 to 9:1 in state-operated factories. In rural industries, even fewer technicians and skilled workers were available, because no graduates from colleges or technical schools were assigned to work there in the past. Thus, the overall demands for technicians were enormous.

On the other hand, the "iron bowl" policy of lifelong employment was being broken in the state-run enterprises. A large population of surplus employees would face unavoidable career changes. This population must receive necessary assistance or training to reenter the job market. Vocational education was also needed for those in the work force to maintain or advance their careers. Furthermore, a great need was emerged for the education of entrepreneurs. Therefore, vocational education has a great role to play in the current society.
The educational reform

The secondary school curriculum in China was typically standard without any elective courses. A great emphasis was placed on learning of science and mathematics in regular high schools. A common criterion to measure the success of a high school was the percentage of graduates entering post-secondary education. The national averages of this figure were about 4 percent in 1980 and 25 percent in 1989. Most high school graduates must be ready to enter the work force even without sufficient career preparations.

By transforming many regular schools into vocational schools, fewer students would compete for college entrance, and more students could be better prepared for work. This would not only assist more students for immediate employment but reduce the pressure from the public demanding more opportunities for higher education. This seemed to a practical way to achieve greater social efficiency.

Some problems in vocational education

A study by Wang, Yang, Zhang, and Yang (1991) identified several major problems of the current vocational education system in China: (a) the schools were too many in number but too small in size; (b) the specializations were too unstable and narrow; and (c) the employment rate of graduates in relevant areas was too low. Tsang (1991) listed additional problems in the Chinese system, which mainly existed in vocational high schools: (a) lack of qualified teachers; (b) lack of adequate curriculum materials; (c) lack of necessary facilities such as shops and fields; and (d) lack of funding.

It was not surprising to find these problems considering the enormous growth of vocational programs in recent years mandated by the government. But
this may damage the image of vocational education and hinder its further development. Therefore, new strategies were needed to improve the quality of vocational education.

**Strategies for improving vocational education**

Central to the new strategies was a need to adopt a new philosophy of vocational education. Vocational education should be defined as "education aimed at the preparation of people for a working life" (Lewis, 1990, p. 13). It is a vital linkage between education and work. The success of a program should be determined by the performance and satisfaction of its graduates on the jobs. Vocational education must adapt to and serve the market economy in China.

The first strategy was to continue the strong leadership of the government. Priorities should be on curriculum development and vocational teacher education. New textbooks in both areas of technical skills and applied academics must be developed. The qualification for the vocational teacher may need to include a minimum of working experiences in industry and business.

Vocational education is usually more costly than general education (Finch & Crunkilton, 1989). A study by the World Bank (1989) suggested that vocational education was several times as costly as general education in China. Full funding from the central government is unrealistic.

The allocation of government funds can be an effective means of quality control. Accountability should be built in any vocational education program. Competitions must be encouraged among the providers of vocational education. The poorly managed programs should be eliminated. The best programs in the
nation could be used as demonstrations for the professionals in vocational education.

Second, vocational education must be based on the needs of the community. Vocational education is charged with the responsibility of maintaining strong ties with a variety of agriculture, business, and industry-related areas. Employers in the community are able to identify their needs and to assist the school in meeting these needs. Identifying the emerging sources of employment will also aid in keeping vocational programs relevant (Finch & Crunkilton, 1989).

In China, vocational high schools were run by the education bureaus. There were no close ties between vocational schools and the local business and industry. The establishment of a business-school partnership may be achieved by setting local advisory committees to vocational education. Vocational schools must fully use the resources in the community, such as funding, facilities and equipment, human resources, and cooperative training stations.

Third, vocational education must allow maximum individual choices. Great social efficiency can be achieved only if individuals in the society have developed their potentials. The goals of vocational education are not confined to the skill development of the students for immediate employment. It must contribute to a democratic society by empowering people to become responsible decision-makers. Individuals should be capable of making career decisions in a market economy.

The scope of vocational education may include helping people to enter, maintain, and advance their careers. Graduates of vocational education programs should have reasonable chances to receive a college education so that the traditional "tracks" in schools cannot block the social mobility of an
individual. To ensure that, vocational curriculum should have a sound academic component which must be integrated with vocational skills. Vocational education programs must also be fully articulated in the whole educational system.

In short, the development of vocational education requires careful long-term planning with a futuristic vision. Joint efforts of schools and others in the local community are needed to ensure the program quality. Vocational education leaders must build a positive image of vocational education in the society.

Comparisons between Vocational Education in China and in the US

The policy-makers in both China and the United States have realized that vocational education could be an effective means to develop a productive work force. Vocational education in the United State is supported by efforts at the federal, state, and local levels. Yet, the national strategy for developing vocational education is usually reflected in federal legislation.

There have been three major stages in the development of vocational education in the United States. The first stage was during the period of 1917-1962. The federal government played a limited role in vocational education. The dominate approach was to prepare people for specific jobs. The second stage was during 1963-1983. The federal government fully committed itself to the development to vocational education. The dominant approach was to center people preparing for various jobs. The third stage started in 1985 when the Carl Perkins Vocational Education Act was passed. The federal government shifted its major concern to social problems. The dominate approach has been focusing on equal education opportunities for disadvantaged
In contract, vocational education in China has been supported primarily by the central government. Its sole focus has been on training individuals to satisfy the need of the society. The development of vocational education in China was relatively slow before the mid-1980s.

Strong support from the government is the major factor determining the success of vocational education. In the United States, federal support to vocational education was through the form of legislation, which has ensured the steady growth of the profession in a desirable direction. Without legal protection, the progress of Vocational education in China has experienced many twists in its course.

The historical debate between the Snedden-Prosser and the Dewey camps in the United States posed many fundamental questions to the Chinese model. The Chinese policy-makers should avoid repeating the same mistakes that the United Stated has made in the past. Most importantly, the Chinese model of vocational education must be based on its unique culture.

Currently, both countries are undergoing educational reforms. In the United States, the emerging issues include tech-prep, integrate curriculum, and vocational special needs. In China, major issues are the reform of entrance requirements, placement of graduates, and vocational teacher education. Both sides are calling for more involvement of business and industry and building a better image of vocational education.

Exchange of ideas among vocational educators between the two countries could only help improving the practice of the profession. In the age of global economy, there is a great potential for cooperation among vocational educators around the world.
Conclusions

Vocational education in modern China has experienced four stages in development. There is a great need for vocational education in China. Reform of the educational system has a high priority for the development of vocational education. Many regular high schools were transformed into vocational high schools.

Vocational education should be defined as education aimed at the preparation of people for a working life. A set of strategies is needed to guide its future development. Strong leadership from the government is essential. All vocational programs must be based on the needs of the community. Individuals should have maximum choices in the new vocational education system.

The effort to vocationalize secondary education in Chinese is probably one of the boldest field experiments ever conducted in the history of education. The success of this experiment is critical for the fate of vocational education around the world. Strong support from all sides is needed to help this experiment succeed. Vocational education researchers should keep continuous observation on its future development.
References


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