

## The System for Training Professional Engineers and Technicians for Each Sector of the People's Economy in the DPRK and the Superiority Thereof

Gyong-Il Kim\*

Keywords: higher education, occupational education, technical school

Today, under the excellent socialist education system founded for the people by President Kim Il Sung, all of the people of the Democratic People's Republic of Korea can study freely, work freely, and make full use of their talents and abilities in order to build a mighty socialist state.

In the DPRK, the training of the engineers and technicians required by each sector of the people's economy is carried out via a unique socialist education system, which is a supremely powerful tool in building a mighty socialist state.

The training of professional engineers and technicians for each sector of the people's economy in the DPRK begins with various forms of higher education.

General Secretary Kim Jong Il pointed out the following.

“The higher education system, which includes universities and vocational colleges, is an education system for cultivating personnel in the fields of science and technology with knowledge of a rich array of specialist fields, as well as for nurturing ethnic leaders.”

The higher education system is an education system for cultivating personnel in the fields of science and technology with knowledge of a rich array of specialist fields, as well as for nurturing the people's leaders.

The DPRK's higher education system is divided into a full-time higher education system, in which participants focus exclusively on their studies, and a part-time higher education system, in which participants study while working; this is one of the characteristic features of the DPRK's unique education system.

The full-time higher education system is designed to nurture talented scientists and engineers, as well as the people's leaders, and includes universities that cultivate scientists and engineers for all sectors, technical universities focused on a particular sector, and various polytechnics.

The part-time higher education system is a unique system that aims to cultivate all workers who currently have an occupation, helping to develop them into talented scientists and engineers, experts, and technical leaders in specialist fields. The institutions through which such education is provided include various factory colleges, correspondence colleges, farm colleges, and fishing ground colleges.

With the aim of guaranteeing to fully meet demand for scientists and engineers, which is growing by the day in each sector of the people's economy, and also ensuring that all of the people can serve as scientists and engineers, the state is systematically targeting all workers in its efforts to cultivate talented engineers and experts with scientific and technical knowledge in specialist fields.

The DPRK's higher education system is an education system for nurturing the engineers and experts required in the people's economy and occupations in each sector.

Above all, the DPRK's full-time higher education system is the main education system for nurturing the engineers and experts required in the people's economy and a diverse range of occupations in each sector.

The full-time higher education system could be described as a continuous program that is closely linked to the occupational deployment of the engineers and experts that have completed that program. Once graduates have successfully completed the DPRK's full-time higher education program, the state takes responsibility for deploying them in an appropriate workplace, aiming to place the right person in the right job, in accordance with the level of skills and specialist knowledge that they have attained.

Most of the engineers and experts who have received higher education in the DPRK are assigned to managerial posts and occupations appropriate to their level of skill and knowledge in their specialist fields, so each person fully demonstrates their wisdom and talents, based on the knowledge that they have learned.

The full-time higher education system is a unique education system that teaches workers with posts in the various sectors of the people's economy the specialist scientific and technical knowledge relevant to the occupations in advance, thereby fostering talented engineers and experts.

It is a universal phenomenon in capitalist states that no matter how highly educated an engineer might be, they have no choice but to opt for a workplace outside their field of specialism if there is no demand for their services at a relevant company.

However, the DPRK's higher education system cultivates in a planned and systematic way the engineers and experts required by each sector of society and the economy, based on calculations of demand for scientists and engineers, and guarantees that they will be deployed in an appropriate workplace suited to their specialist knowledge and skills after completing their higher education.

This demonstrates that the full-time higher education system in the DPRK is not an academic program purely for the purposes of education, but is rather a program of technical human resource development that systematically cultivates the numerous engineers and experts required by the diverse array of occupations in each sector of the people's economy.

Moreover, the part-time higher education system is another of the key education systems for cultivating the technical personnel required in a wide range of occupations in the people's economy.

To develop all workers into talented technical personnel who have received higher education in a specialist field, the DPRK has developed a part-time higher education system that provides a specialist scientific and technical education to front-line workers while they continue to work.

Today, in the age of the knowledge economy, the reality is that all workers must be developed into scientists and engineers fully equipped with an abundance of knowledge, both theoretical and practical.

The part-time higher education system is a new style of higher education that organically links education to production, and theory to practice. Based on ideas and proficiency developed in the process of practical production activities, students following these programs gain an in-depth understanding of the latest basic scientific theories and principles, while their work on the shop floor enables them to apply the theories that they have learned in class to real-life production. Accordingly, the part-time higher education system is the education system that most closely links education to production, and theory to practice, developing students into talented

technical personnel equipped with both theoretical knowledge and practical skills.

The part-time higher education system is a unique education system that fully cultivates and guarantees the supply of the technical personnel needed in all occupations in the people's economy.

The part-time higher education system enables workers to gain not only specialist scientific and technical knowledge related to their own occupation without the need to suspend their involvement in production work or leave their job, but also a wide range of knowledge in all areas of society. This means that the state can provide all workers with higher education without affecting efforts to build up the socialist economy. The part-time higher education system enables workers involved in front-line production and labor activities to become technical personnel equipped with the abundant scientific and technical knowledge required in their workplaces.

Most of the workers who have completed the part-time higher education system go on to be engineers, researchers, and experts with a high level of scientific and technical knowledge in managerial posts and occupations in all sectors of the people's economy. Moreover, they go on to become not only people's leaders, but also talented technical personnel serving the nation as a whole, capable of creating many original ideas, designs, and inventions of national significance while working in their current workplaces, thereby contributing substantially to efforts to build up the economy.

Precisely because students continue to work as they learn, the part-time higher education system could be described as an outstanding system for turning all workers in the DPRK into skilled and creative engineers.

Technical schools also form part of the education system for cultivating the engineers and technicians needed in occupations in all sectors of the people's economy.

Technical schools are a form of vocational educational institution through which each organization and sector of the people's economy takes responsibility for training workers who do not have the vocational skills required in their sector and workers who should have more advanced skills, developing the new generation deployed in each organization after completing the 12-year program of compulsory education into technicians who can work autonomously in a specific workplace.

The overall standard of technology and equipment in the people's economy is growing continuously, and the range of new managerial posts and occupations is expanding by the day, so each sector of the people's economy requires not only experts and engineers, but also technicians.

The DPRK's technical schools target the new generation, who have completed their general secondary education and have reached working age; these schools educate them in a diverse range of skills and techniques, enabling them to work in specific workplaces. Moreover, as well as being institutions that provide a formal education to workers without the skills currently required by a factory or enterprise, these technical schools are becoming institutions that predict and systematically cultivate the technicians that will be required in relevant sectors of the people's economy in the future.

Under the Workers' Party of Korea's proactive policy of cultivating technicians, the DPRK today has numerous institutions for nurturing technicians, including technical schools, technician training schools, and technician training groups, and many technicians are undergoing professional development via this formalized system for fostering technicians.

Technical schools are also organized and run by factories, enterprises, relevant sectors of the people's economy, and each region, tailored to their specific characteristics.

First and foremost, to cultivate technicians, factories and enterprises organize various forms of technical school tailored to the specific attributes of each occupation.

Large-scale factories and enterprises that need to develop a large number of technicians set up and run technical schools or technician training schools, while those that need comparatively few establish technician training groups.

Technical schools can be classified into general technical schools, advanced technical schools, and special technical schools, according to the skill level and occupation of the technicians that they seek to cultivate.

Direct responsibility for the management of technical schools run by factories and enterprises is held by the factories and enterprises themselves.

In addition, each socioeconomic sector and region establishes and runs its own technical school to train the technicians that it needs.

Where organizations have few employees or the enterprises in a sector are dispersed over a large area, technical schools covering a particular region are established. For example, organizations and enterprises in the agriculture, local industry, local construction, fisheries, urban management, commerce, and service sectors are dispersed across a wide area within each region, and only needs to cultivate a few technicians, so technical schools in these fields are generally organized on a regional basis.

In the agricultural sector, there are cases in which technical schools are established to serve a single county or city, and others in which the schools serve several cities or counties.

Where organizations and enterprises are seeking technicians in the same occupation, technical schools are established to serve a particular sector or region.

For example, technical schools such as prospecting schools, forestry schools, commercial executives' schools, agricultural management schools, captains' and engine drivers' schools, professional drivers' schools, and projectionists' schools cultivate technicians for the same occupation in each sector, so they are organized on a sector- or region-wide basis. In addition, there are special technical schools established to serve the whole country, including a diesel engine operators' school, a compressor operators' school, a bulldozer operators' school, a submarine operators' school, and a rail track maintenance supervisors' school.

All organizations and enterprises send the new high school graduates allocated to them and workers who do not have the relevant professional skills to these technical schools for training before deploying them in work requiring specialist skills.

Technical schools take in graduates from higher-level secondary schools, as well as those discharged from the military, housewives, and others with no vocational skills, training them as third- or fourth-class technicians; in addition, they accept people already working on the shop floor, training them to a level or two higher than their current level.

Technical schools provide each graduate with a diploma indicating their technical proficiency rating.

While fulfilling their basic mission of nurturing all students as builders of socialism armed with the great *juche* idea, the DPRK's technical schools educate students in the specialist skills required in their assigned occupations through teaching and learning focused on practical education.

Today's formalized system of vocational and technical education is the result of the development of the new system of technical schools under the wise guidance of President Kim Il Sung, and the establishment of the technical schools required by organizations in each sector of

the people's economy and each area of society.

The system for cultivating engineers and technicians in each sector of the people's economy gives the DPRK tremendous superiority in building socialism.

The primary area that demonstrates the superiority of the DPRK's system for cultivating engineers and technicians is the fact that it is a fully inclusive education system that develops all members of society into talented technical personnel for the nation's workplaces.

In the DPRK, if a person wishes to work at a particular workplace, they need to master the relevant technical skills without fail and to take a relevant course for cultivating technical personnel.

As well as students going out into the world of work after completing the 12-year system of compulsory education, those moving from a certain workplace to another post or occupation must complete a certain program of vocational and technical education, as must those leaving their occupation for whatever reason and those participating in social production work for the first time.

This is because education in the DPRK is not a system aimed merely at the development of a specific sector or company, but a fully inclusive education system for educating all workers, the essential mission of which is to instill in all workers the technical skills needed to work in a specific workplace.

In capitalist societies, which are entirely driven by the pursuit of profit, technical training and education programs do not have the provision of fully inclusive education as their mission; rather, such training and education is closely related to corporate profit-seeking, with technical education selected to achieve that goal and offered only to a limited few.

Efforts to cultivate engineers and technicians in the DPRK target all workers, so all workers in society are free to study freely not only at technical schools, which provide short-term skills training, but also on higher education programs that cultivate specialist scientists and engineers, irrespective of whether the individual concerned is currently working, has an occupation, or is becoming a working member of society for the first time. After going through this process of education, each individual is deployed in a relevant occupation, based on the technical skills that they have acquired.

The superiority of the DPRK's system for cultivating engineers and technicians lies in the fact that it is an education system that regards the provision of specialist skills and knowledge to all workers in order to develop them into talented engineers, experts, and technicians as a crucial mission.

Another area of superiority is the fact that it develops all members of society into independent and creative people, fostering technical personnel with an awareness that they are the true masters of the state and society.

In the DPRK's system for cultivating engineers and technicians, the education provided to workers does not relate solely to their occupation. While education in the DPRK is a program of technical skills education aimed at enabling all workers to work freely, fully demonstrating their skills in the workplace, it is also a vital educational program for developing them into the independent and creative working members of society who are the true masters of society.

The trend in modern education is to cultivate technical personnel capable of meeting the needs of social development and the age of the knowledge economy not only by training them in their own field of specialism, but also by providing them with a multifaceted array of technical knowledge in a wide range of fields.

The education provided in the DPRK includes not only technical education in a particular specialist field and occupation, but also educational programs that provide a multifaceted array of knowledge concerning various aspects of daily life in society, including politics, economics, and culture. The process of ensuring that all members of society can utilize their skills in their workplace enables them to fully demonstrate their abilities as independent and creative individuals who are the masters of the state and society.

The content of technical education in capitalist societies revolving around money is constrained by the greedy demands of profit-seeking corporations. Such education programs therefore churn out warped individuals who pursue money alone, acquire technical skills solely for the purpose of money, and become wage slaves forced to sell their technical skills to corporations to gain money.

In capitalist societies, the work of those with jobs is not the work of independent, creative humans, but rather work that they are forced to do in order to live. Moreover, the technical skills that they possess are not skills demonstrated in order to play an autonomous role in their own right for the sake of their state and its social development; rather, they are solely a way of earning the money they need to survive and a means of making money by helping corporations to make a profit.

Technical education in the DPRK is an educational program aimed at giving all workers the awareness that they are the true masters of the state and society, and, based on this, instilling in them the techniques and skills that they need to work creatively to the full extent of their abilities in their assigned workplace. Unlike in capitalist societies, the content of this education is based on the cultivation of autonomous individuals and is designed to give them an abundance of knowledge in their field of specialism, while developing them as fully-rounded social entities. This is another of the elements of the DPRK's system for cultivating engineers and technicians that makes it intrinsically superior.

Today, the DPRK's system for cultivating engineers and technicians is moving into an even more advanced stage, under the wise guidance of First Secretary Kim Jong Un.

As a result of First Secretary Kim Jong Un's emphasis on science and education, the DPRK's higher education system is developing further by the day, cultivating countless engineers and experts required in the diverse array of occupations in each sector of the people's economy. In addition, these individuals are making a powerful contribution to the building of a mighty socialist state. Moreover, the DPRK's system for training technicians is being further enhanced and strengthened by increases in the number of the technical schools required by each sector and organization, while qualitative improvements in both study conditions and educational initiatives are being implemented in all technical schools.

Socioeconomic development will further perfect the DPRK's system for cultivating engineers and technicians, which will undoubtedly enable it to demonstrate its superiority and power even more clearly.

\* Researcher, Institute of Economy, Korean Academy of Social Sciences