

A Study on the Cultivation Strategies of Logistics Talent in China

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Abstract

The logistics industry is based on personnel, and without talented individuals, corporate success is impossible. Therefore, we should fully understand and research China's future in logistics along with the status of related personnel in the country, and seek to establish valid measures concerning our country's logistics personnel. In order for Korea's logistics industry to develop, we should also consider professional training of personnel and the establishment of training facilities. The training of logistics personnel can promote national competitiveness, and can contribute towards the national economy. Also, the production of competitive personnel can secure the healthy and secure development of the Chinese logistics industry. In conclusion, our companies should continue professional training for current and new employees, and through internal training and certifications, improve workers' capabilities and productivity, promoting the healthy development of the logistics industry.

Keywords : logistics, Chinese logistics industry, Cultivation Strategy, Personnel Training

JEL Classifications : D40, L87, L90.

I. Introduction

The logistics industry has become one of China's economic growth factors, and has been the subject of much interest from all corners of society. Following the last 20 years of enlightenment, China's logistics industry has enjoyed a peaceful development, and one can anticipate the growth potential of the large market. Morgan Stanley's Asia-Pacific research team has reported in the "China Federation of Logistics & Purchasing" that China's annual logistics costs have exceeded 200 billion dollars. According to experts, the current total expenditure on logistics has exceeded 1.9 trillion Yuan, and domestic transportation and logistics costs have exceeded 200 billion Yuan, with a relatively high-speed annual growth of 8% (Gao, 2002).

Large amounts of foreign capital have entered such an entering

market. During the past few years the number of Chinese logistics companies has greatly risen, which include many large companies in the international logistics arena. Many local governments have also recognized the logistics industry as one of the pillars of economic development, and have chosen it as one of 3 pillar industries like Shenzhen City. Shanghai recently selected it as one of four rising industries (Ding, 2004).

Following the rapid development of the Chinese logistics industry, its personnel shortage problem is also being slowly exposed. Based on the "Chinese logistics personnel research report", among the 1.676 million workers in the industry, only 21.56% had received higher education, lower than the national average of 24.33%. The percentage of advanced and intermediate occupations were, respectively, 0.85% and 4.38%, lower than the national average of 1.86% and 7.19%. As most logistics companies in China were formed from traditional warehouse and transportation companies, most workers were short in the knowledge and ideals of modern logistics. They were thus more difficult to accommodate needs for management and control in this era of global economic unification.

In the recent years China had achieved rapid economic growth in the establishment of the logistics department, as has the logistics industry itself. However, as higher education takes a relatively long amount of time, and requires a further period until the student finishes his career path and adapt to it, the needs for logistics development and personnel cannot be met by education alone at the moment. From 2005 to 2010, China would require an annual growth of 1.04 million logistics workers each year. From 2010 to 2020, China would require an annual increase of 1 million workers. This displays a deep problem in the current status Chinese logistics personnel. The lack of personnel with the knowledge of modern logistic systems and capable of management, is one of the largest reasons for the bottlenecked development of Chinese logistics. This phenomenon can be traced to the developmental history of the Chinese national economy.

This paper will begin with the introduction (Chapter I), and continue to discuss the significance of developing logistics personnel (II), the present condition and analysis of international logistics personnel development (III), the Chinese procedure and strategy for the development of logistics personnel (IV), and the Conclusion (V).

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II. The significance of developing logistics personnel

1. Logistic corporate investment in intelligence

Logistics is a new industry that has risen under the development of science and information technology, with the aim of adapting to the global economy. According to statistics, there are currently 2 million logistics companies in China, and most of them share the same 4 characteristics. The first is the intellectualization of logistics personnel; the second is the globalization of logistics administration; the third is the flexibilization of logistics management; and the fourth is the flatness of logistics organizations. These characteristics show that objectively, logistics companies must gather a high-quality worker base, and must therefore increase their investment in intellectual and personnel resources.

Most companies believe that the promotion of employee welfare and encouragement are a crucial part of worker training and therefore of intellectual investments. According to foreign reports, spending 1 dollar on employee training generates 50 dollars of relative profit, and the input-out-put cost ratio is 1:50. In other words, manpower resources are a type of intellectual property, and the training of personnel can improve the labor function, along with logistics operations and management. It can also strengthen the preservation of human capital, and increase more returns than alternative forms of investment.

Investment involves the consideration of not only the direction of investment, but also of the time and method of a good investment. Training is definitely a wise choice in investment – it cannot waver, and training education is ‘lifelong education’, and employee invigoration is an ordinary routine. Training, in a limited sense, is done by a trainer at a specific moment and time to organize the participation into a specific learning activity, and sending them outside to participate in programs such as public learning courses, a company’s internal lectures, research groups, etc. Training in a broad sense includes not only these forms of participation, but also an employee’s work research, problem analysis, group meetings, labor competition, and ‘learning through work’. In a sense, after a company has established an educational company structure, an employee’s arrival to work is an enhancement of the employee’s education, a creative profit for the company, and a method for contributing to society.

2. The important core of the logistics educational process

Ever since China began its logistics educational course, 6 years of searching and practicing have gained remarkable success, and logistics education has achieved a great breakthrough. The logistics majors in universities nationwide have already increased from 1 in 2001 to 218 in 2006, and 30,000 students. Higher employment and advanced specializations in the industry now number 500 places, with 150,000 students. Secondary vocational school now number 1,000, with 300,000 students. Masters and doctorate degree-providing universities have exceeded 100. The number of students who applied for a logistics education with business applications were at least 500,000,

and can provide about 150,000 to 200,000 trained personnel annually. As such, the education of logistics has extended and has greatly contributed towards solving the problem of logistics personnel demand and supply.

On the other hand, while the training of logistics seems relatively congested there are 200 training centers, 33 testing centers, other advisory companies, and training organizations across the nation that train logistics and related personnel across the nation, that have been certified by The federation of Chinese logistics and purchasing. However, the size and efficiency of the training is limited. Therefore one important task would be to strengthen and improve logistics education, while strengthening the training of logistics personnel. This is an area where the educational process will display its efficiency, and logistics training is in some respects more needed and important than simple education.

Logistics science is a newly arising science, and if we observe that high-class logistics teachers are in deficiency, the same can be said for logistics trainers. It can be shown that the situation in logistics training greatly reproduces the situation in the university education of logistics. The two are both related and differentiable. The major differences between the two are listed below in <Table 1>.

<Table 1> Academic education and Professional training

	Academic education	Professional training
Goal	Training of personnel required by companies	Training of personnel who can work well in companies
Nature	Diffusion education, stage-up education	Tailored education, life-long education
Content	Numerous and all-encompassing, system planning	Small but specific, and practical. Deficiencies can be supplemented.
Focus	On ‘What to do and why’	On ‘What to do, and how’
Center	Teacher-based	Student-based
Method	Learns from watching, based on lectures	Learns from work, varied
Atmosphere	Single item exchange, social culture inherited	Mutual exchange, exposed to company culture
Evaluation	GPA	Mainly the increase of achievements

Relatively, education and professional training establish the modern training theory: training is a sort of revolutionary activity, an improvement of an employee’s life, and the crucial method of increasing a company’s core competitiveness; training strengthens a company’s learning, policymaking, executive and competitive capabilities. Training is a must, and the increase of capabilities is true learning; training must go beyond the learning of skills, and teach the student how to learn. Being able to learn is more important than being proficient, and the training of professional personnel is more useful than academic education. For China, professional training in logistics is as important as its academic education.

3. Special creative activities

Logistics professional training is more creative activity than the academic education. Currently, logistics professional training is proud on the surface, and eases the personnel deficiency problem to a certain extent, but there is a trend of 5 problem areas. First, the training of high-profile individuals is emphasized, while the training of general workers is belittled; international certifications are emphasized, while practicality is belittled; external field education is emphasized, while internal training is belittled; class education is emphasized, while practical training is belittled. These problem areas present a constant negative effect on the development and efficiency of training. Currently the development of logistics technology is a fast one, while there are too many companies and employees need a recharge. The approximately 2 million logistics companies need a constant education for their workers, and it can be said that the duty of training is a heavy one.

III. Current Status and Analysis of International Logistics Personnel Training

1. International Logistics Personnel Training

1.1. Foreign Logistics Personnel Training

In the process of requiring logistics personnel, developed countries have formed a relatively acceptable educational and training structure for personnel. As the experience of developed nations proves, the crucial method of developing modern logistics is achieving high-quality logistics management organizations. In the United States for example, there are already majors offered in logistics, including researchers, students, and vocational training (Xien, 2004). Many renowned universities have provided logistics management majors, and have created logistics programs for business and related major students.

MIT has become the USA's strongest science and engineering school, and has achieved a successful experience in the establishment of a logistics major, providing great value to logistics education in China. MIT's logistics training facility was the MIT traffic logistics research center. It has 50 faculty members, and has participated in the research and related education in logistics. It has also carried out projects closely related to the industry, and led students related to traffic logistics and carried out researcher training. The center's main research direction included both traffic and logistics, and the degree training included masters in logistics process, traffic science, and a doctorate in a combine major. Besides regular education, the American logistics management council established the United States logistics professional certification, and all related workers required this certification to work. MIT also provided professional training programs other than its aforementioned academic programs (MIT, 2012).

Many countries have seen that the most important thing is to train logistics personnel in terms of professional training of employees.

They have established both regular and irregular training programs and structures, and satisfied the varied demands for logistics personnel. 18 universities in the US have a major named logistics and transportation. These are Arizona State University, San Francisco State Unit, University of Georgia, Northwestern University, Uni. of Illinois at Urban Champaign, Iowa Sate University, Michigan State University), and Japan's Tokyo University of Marine Science and Technology, Kobe University are also training logistics personnel (Kim, 2005). As such, developed nations are striving to establish logistics courses and train human resources.

1.2. The status of China's training of logistics personnel

The education of logistics personnel in China has started relatively late, and the establishment of courses is still not completed, and is still in its early phase. The current status is: many courses and programs related to logistics are present in separate majors, and have shown large fluctuations in terms of educational emphasis (China Federation of Logistics & Purchasing, 2002). Some enrolled science and engineering students as if emphasizing logistics management, leaning towards logistics strategy, logistics planning, logistics marketing and logistics business management and execution. One example was weighted towards logistics process schools and selected engineering students, and in these schools some were only taught applied areas or several engineering technologies and designs for logistics-related areas. For example, packaging, delivery, and storage. According to statistics, before 2001, Chinese graduate schools recruited students in logistics majors or related majors, with 15 graduate schools. In 2002, China began recruiting students in logistics in regular courses, and at least 40 instructions provided an education in the form of a major or in that direction. 50 high schools provided majors related to traffic transportation and traffic process, electronic trading (China Federation of Logistics & Purchasing, 2003).

In 2002 the Ministry of Science and Technology and the Ministry of Education allied to send out notices, and following this the management of majors were left increasingly to the high schools, and provided the autonomy for adjustment of high school level 2 majors. In 2003, many logistics-related majors were installed in high schools. Guangdong already approved the new logistics process major in the Hunan Science and Engineering University, and Jinan University established a logistics management major. Other cities were also very keen on establishing logistic majors. The training of logistical transformed from a regular academic education to a supplementary program, and rendered logistics irreplaceable. One group's relatively influential training center has incrementally achieved the public's understanding, and the relatively large influence was: the Chinese Ministry of Labor established the Chinese Federation of Logistics & Purchasing, and established the national standard in logistics.

Therefore the logistics manager national standard; the training program of the Chinese Federation of Logistics & Purchasing established the training program for one international trade center under the WTO for the management of purchasing and supply networks, and some of the program has already started, with some graduate schools being mobilized to translate and organize material. The Chinese Traffic Association also selected one international

logistics capability certificate system, and prepared for the establishment of training programs for four certificates, in the elementary certificate for logistics and transport, the transport and logistics technical certificate, the logistics and transport strategy management certificate, and the logistics and transport management certificate. Also, 'city's labor bureau and the Shenzhen graduate school of Tsinghua University have established an association, and started the process of classifying logistics training, along with the publication of training and examination material. It estimates the training for logistics workers to begin by September of this year. Also, many relatively influential training facilities exist in large numbers. Other schools and companies have allied to improve the training of logistics personnel. UPS and Zhongshan University's academy and Hong Kong City College have collaborated to establish the Ao gang Electronic Logistics Personnel Training Center.

Companies have begun to internally realize the importance of logistics training (Yu, 2007). The personnel of Baogong (PGL, 2012) rely on internal training, and recruit graduates from renowned universities each year, along with logistics experts after entering the company to carry out professional training, and combine theory and practice in actual works later on. Some companies follow one rule: middle-class logistics personnel usually rely on internal training, classification, and school establishment, according to individual demands. High-class personnel are trained in schools established by collaborating high schools and graduate schools which decide the training direction, along with overseas training.

In the training process of logistics personnel, a notice-worthy situation exists: many foreign certification agencies collaborate with national related associations, graduate schools, and other institutions, and have established a domestic certification system. The most influential are the British Royal Logistics and ILT affiliated certificates, and certification exams have already been carried out twice in Beijing, Xiamen, Guangzhou, Shenchuan, etc. As the Chinese logistics industry has not yet established a united domestic standard, international standards and regulations are strongly being incorporated with the aid of the ILT and international standards. The education of foreign developed experiences strengthen our own logistic knowledge system, and reduces the differences in the industry education, and increases the workers' standards—all this has led to the relatively fast development of Chinese logistics. As discussions are heated on the training atmosphere of the Chinese logistic personnel, there has yet been no significant achievements in the quality of teachers, development of educational material, or method of training. In reality, a systematic program for developing personnel and logistics majors has not been established yet.

2. The Analysis of Chinese Logistics Personnel

2.1. An analysis of the number of Chinese logistics personnel

(1) There have been many reports on the internet, the newspapers, and on the periodicals and magazines, about the deficiency of logistics personnel compared to the great demand for them (Song & Ken, 2006). When 2010 comes, the demand for high-class personnel in Shenzhen would number 10,000 to 20,000, and the demand for

basic logistics workers would number 100,000 approximately. The requirements in Guangdong in its entirety will surpass a millions, but only 5,000 professionals are trained in China each year.

(2) The wage rate could also be a source of the deficiency. According to reports, Shanghai's top-class personnel were recruited on a salary of 200,000 ~ 800,000 Yuan each (<http://www.jielee.com/news/yj002.php>). The graduates of some universities have already been scouted, with at least 5,000 Yuan in monthly salaries. These are human resources with a grasp of modern economic commerce, transport and logistics, with English skills, and their salaries can reach 1 million Yuan.

(3) The shortage of professional logistics teachers is the source of the deficiency of logistics personnel. As institutions for the education of logistics processes and logistics management are being established and the heat for logistics is rising, teachers have become a deficient resource as well. As the logistics development of China is relatively backwards, there is a severe problem of lack of knowledge and aging as there are no teachers and professors teaching core areas of logistics in the logistics major. Along with the currently discussed logistics training, the lack of teaching resources and complicated training process are causing bottlenecks in the personnel deficiency problem.

(4) One view on the lack of personnel is from the companies, and that the earlier problem was that of the lack of passed personnel, another problem is that there is an excess of unnecessary personnel (Song & Ken, 2006). This means that while there are many so-called trained personnel in the logistics industry, few actually have the talent required. The industry requires those with practical experience.

(5) The lack of personnel and the special nature of the logistics industry are interrelated (Gao, 2002). Logistics work is heavy in applications and control, and there is a relatively high demand for logistics personnel. True logistics personnel would need to be trained in logistics planning, analysis, transportation management, warehouse management, inventory planning and control, purchasing and inventory management, international logistics management, production planning and execution, customer service management, informational system and control, logistics services sale management, and logistics process. At the same time, logistics involves various other areas such as electronics, machinery and economics. This is why, compared to international standards, it is still difficult to find such multitalented personnel in storage, transportation, trajectory planning, etc. in our country,

2.2. The capabilities of Chinese logistics personnel

Logistics personnel are in charge of logistics works such as transportation, storage, packaging, etc. They are also charged with the management of personnel, finance, equipment, information, methods, etc. along with logistics planning, quality control, technological support and financial management (Gao, 2002).

(1) Proficiency in applied computer skills: Computers provide a

wide range of applicability in the logistics area. According to estimates, the time using computers takes over 30% of the entire time spent working in logistics. Even basic tasks of logistics management require the use of various documenting software, network communication and database software, etc.

(2) Good communication skills: Modern logistics emphasizes the combination of functions. With inter-company competition increasing along with the area of competition, logistics also begins to display globalization trends of going beyond industrial borders. This is why with the development of the logistics industry, language skills are greatly important, and those with people skills can 'achieve much more with less effort' often.

(3) Professional skills applicable to the position: Following the differences in position and work, the demand for logistics personnel can be divided into four categories: the management type, the theory research type, the theory application type, and the actual operation type.

① management type: mostly working in the logistics management area in companies or the government, and are in charge of macro-scale planning with certain discretion in such matters, along with the related responsibility. These personnel require relatively high-class organizational skills, along with breakthrough capabilities, a certain basic knowledge base and relatively strong application skills. ② theory research type: normally working in research institutes and graduate schools, on the training of personnel and development of technology. Their main mission is the improvement and spreading of logistics theories. These personnel require relatively advanced theory training and relatively strong revolutionary minds, along with strict working ethics. ③ theory application type: usually working in the logistics management and logistics business process onto, logistics resources management in companies, these personnel are charged with the establishment of logistics planning and hands-on tasks. Their work implicates hands-on work and experience, and requires relatively strong technical skills. These personnel must be equipped with a certain basic knowledge in logistics, along with relatively strong problem-solving skills. ④ actual operation type: these personnel usually work in the field in logistics-related technical works. They are the actual workers of the logistics business, and require relatively high work execution skills.

Although logistics personnel require such aforementioned skills, current Chinese personnel are greatly deficient in such matters.

IV. The strategy and process of Chinese logistics personnel training

1. The training process of Chinese logistics personnel

The ISO is an international standardization organization, and its main function is to establish international standards. The ISO 10015 was announced by the international standardization agency in 1999 and is used as a global standard in training standard organizations, and is one of the ISO 9000 quality control standard's professionalized

standards, and is the only ISO training quality international standard. It has been changed to a national standard: GB /T19025 – 2001 quality control training guideline. Modern logistics training is a series of circular processes, and five steps exist. Therefore the training of Chinese logistics personnel should be carried out in the following steps (Gao, 2002).

1.1. Grasping the demand for logistics personnel

The usage of the word training demand is widely used, but only few truly understand its meaning. In simple terms, the gap is the demand for training, and the demand is generally divided into four categories. The definitive training demand carries out the definitive gap after gathering much information through observation, lectures, and surveys. The expressions required from and displayed by workers is a training demand on the individual level. A field training demand is the difference between what the field required in terms of achievements and how much it actually achieves. An organizational training demand is the gap between the working plans of an organization and the actual results. The importance here is finding the source and gap of training demand, and training should be carried out to reduce this gap and solve the issue.

1.2. Training plans for logistics personnel

This is for reducing the gap of the source, not the research of the source. This is why after determining the training demand, training should be planned and structured, before applicable plans can be chosen. Training plans should be divided into the year's overarching plan and specific period plans. These plans satisfy the 6W3H – this stands for why (train), who (trains), whom (is trained), what (is trained), where (is trained), when (is trained), how many (are trained), how much (does training cost) and how (should training be done). Otherwise, training cannot be carried out. A precise grasp of such matters is required.

1.3. The training of logistics personnel

The carrying out of training is the carrying out of the plan's each steps, and is one important part of training. The 5R method can be referred to in the recruitment proves, and the carrying out of training plans can create 5 "rights". In other words, the carrying out of training is a mutual process of the combination of the right trainer, the right time, the right method, the right target, and the right training content. This activity can be divided temporarily into employee training and transfer training, and content-wise into purchase training, warehouse training, transport training, supply-chain management, etc. In terms of levels, the training of general workers and the management training of middle- and upper-class workers. These type-wise training should emphasize the right time, right quality, right quantity, etc. at the time of application.

1.4. The evaluation of the logistics personnel

The evaluation of training is the evaluation of the quality and efficiency of training, and is an important part of determining the

wage paid to the trainer. The Sino-European coalition's engineering profession education training section is referred to when evaluating, and generally involves the anonymous filling out of an evaluation sheet from currently enrolled or graduated students. It would involve the manner, qualification, skill, material, etc. of training, and students can indicate the amount of achievements in the evaluation sheet and fill out a recommendation. For a company's internal training, generally visiting, surveying, evaluating action plans, etc. are done after three months, and evaluations are done on the area of action and the area of effectiveness.

1.5. The monitoring of logistics personnel training

A logistics company has a globalizational characteristic of its management, and follows the ISO 10015 standard in training. Logistics training is carried out according to the ISO 10015 standard's five steps regardless of the organization's size, training content and method, etc. At the center of this training lies monitoring and improvement, which serve to promote a continuously improving training system, as well as quickly determine and solve problems with the quality of training; training can help a company solve its issues, and carry out its management plans. The training of a logistics company should enforce the quality monitoring regardless of subcontract or main companies, and seek to secure the realization of the training goal. The main areas to be monitored should be human resources; the main personnel of the monitoring are the human resources manager and the professional training agent; the method of monitoring would be observation, collection, and briefing reports, etc. and the grounds of monitoring are pre-formed documents and orders. The training monitoring forms the basis of the training evaluation, and the training monitoring covers the whole process of the training, and is the process management of the training. The analysis of the training demand, process planning, training implementation, to the training evaluation should be carried out by someone with the requisite capabilities, feedback the information at once, point out the problems, and promote their solution. This is beneficial towards establishing the effectiveness of management, standardization of the process, the applicability of the content, and the contrast of efficiency.

2. The training strategy of Chinese logistics personnel

With regard to the China's demand for logistics personnel and education phenomena, the Chinese government and logistics companies must establish strategic plans based on the experience of developed countries.

2.1. The Chinese government's personnel training strategy

2.1.1. The establishment and announcement of logistics policies

The Chinese government should announce appropriate policies. For example, it should hand over the authority to control and establish majors to the universities, along with a great amount of liberty in establishing schools for majors proposed by the Ministry of Education and the Ministry of Science and Technology. Universities aid the

speeding up of the training of personnel required by society. Other than this, the government should aid, policy-wise, the development of the logistics industry. It should no longer intervene in the placement of human resources, and control the human resources market through policies, and strengthen the standardization and development of the market. It should also provide a fixed sum to carry out educational programs (Ding, 2002)

2.1.2. The understanding of the long-term point of view of logistics personnel

Higher education plays an important and irreplaceable role in the training of logistics personnel. According to Ding Jungfa, the commerce director of the Chinese Logistics and Digging alliance, the congestion of the logistics education is the main source of the gap between the supply and demand of logistics personnel (Ding, 2003).

Graduate schools and science research institutions are first of all a base of contact with global developed theory, and the research institution for logistics personnel resource management and market. These institutions would have the relatively neutral, macroscopic, and long-term view necessary for establishing long-term plans concerning the human resources market. Graduate schools and science research institutes will satisfy the superiority in the concentration of knowledge and personnel, and a system of higher logistics education. Other than this, the construction of universities and research institutions should be speeded up, and students should exchange applied theory during practice. This also satisfies the need for having a variety of logistics majors, and having a strong correlation between theory and practice.

2.1.3. The enforcement of a logistics certification system

The enforcement of a logistics certification system improves the quality of personnel. The construction of the Chinese logistics and digging alliance requires the operation of various short-term training classes, the organization of systematic training, the participation of logistics training and the earning of certificates in order to satisfy the basic requirements. At the same time, a standardized system for the Chinese logistics professional education should be established quickly.

2.1.4. Standardized education of logistics majors

The Chinese government should carry out standardized education for logistics majors, and promote the understanding of modern logistics to the public. It should also present complex new industries for many companies. Currently, government officials and public workers lack in their understanding of logistic concepts and knowledge, which necessitates a standardized education in such matters. Both general workers and executive personnel should receive such education.

2.1.5. The balance of the supply and demand of logistics personnel

In the current situation of a deficit in logistics personnel, we should handle the current fever for logistics with a developmental

point of view. China should solve the problems at the heart of recent heated discussions, and also anticipate a future period of excess as well. It should precisely estimate the supply and demand of personnel, so that educational services and environments should be provided accordingly.

2.2. The training strategy of educational institutions

2.2.1. The establishment of a combined logistics major

It is a global trend in the development of logistics in academia that educational institutions are establishing complex majors by combining different majors. As mentioned before, the logistics industry is one where many different disciplines come together, and therefore the creation of such combined measures is in accordance with the characteristics of the industry. In such matters, Chenghua University has made a global precedent by establishing the modern logistics research center in March 2002, by organizing the departments of civil engineering, management, mechanics, architecture, engineering, etc. By combining majors, the research center has already equipped itself with the capability to carry out education and research in basic areas in modern logistics theory.

2.2.2. The globalization of school establishment

The establishment of schools in alliance with well-known and developed foreign educational institutions, the recruitment of foreign logistics personnel, and the sending of domestic personnel abroad to train, are the three methods involved. As the Singapore National University has established a relatively high quality of logistics research, Chenghua University established an allied school with the Singaporean university in order to recruit graduate students in two programs, which has established a complete academic system compared to other universities. It is equipped with favorable conditions for the development of logistics education, and can train high-quality personnel well trained in the theory and function of modern logistics. Chenghua University's program of inviting visiting professors and lecturers has also achieved great success in China.

2.2.3. The diversification of logistics personnel education

Ofcourse the professional education and training of logistics personnel is a valid method of solving the current deficiency problem. But a diversification of education and the establishment of a network should also be carried out. Also, a mass training of current workers should be done while acknowledging that the market is changing very rapidly along with the current situation of personnel deficit. This is the valid way of tackling the current deficiency problem.

2.2.4. The satisfactory invitation of professors and content of educational material

Good professors and educational material are an important part of carrying out education. On the basis of absorbing foreign theories and successes in modern logistics, we require the establishment of a standardized educational material and system as required by China

and the modern logistics industry, based on knowledge, technology, and experience. The content should be written from the point of view of modern logistics, but with an emphasis on hands-on work and examples, increasing the practicality of knowledge and increase the participation of industrial managers in the material creating process. The material should also contain information on English and computer skills, in order to develop and train personnel fit for the current globalized and information era. For the future teacher questioning system, many different methods can be employed, such as the invitation of well-known foreign personnel to lecture or create reports, or sending young domestic teachers abroad to train.

V. Conclusion

China should establish a long-term logistics personnel development strategy based on its economic and industrial growth. It should grasp the current size of its personnel from low to high qualities, in various categories such as software and hardware applications, general workers and managers, business management and information technology, etc. These personnel are greatly demanded by the industry. With regards to China's personnel deficit, the demand in Shenzhen city for high quality logistics personnel would reach approximately 100,000 people in 2012, and Guangdong's entire demand for logistics personnel would reach at least a million people. Therefore, if the lack of personnel is such in individual districts, one can easily imagine the situation for China as a whole. The solution of this problem is of great importance. Also, the training of personnel should be carried out while following the aforementioned 4 types theory, according to the person's position.

The Chinese logistics personnel training process should follow the ISO international standard, and the protocol of logistics personnel training. First, the grasp of the demand for logistics personnel: the government and the country's companies should precisely understand and recognize the need for logistics personnel. Second, the planning for training personnel: the aforementioned understanding of the demand should not be for the sake of the search alone, but aim to reduce the amount of deficit in personnel. This is why a full and precise grasp of the demand is necessary before setting a plan. Third, the training of personnel: the carrying out of training. It can be based on the 5R principle. Fourth, the evaluation of personnel training: after the training, constant evaluation of the results should be done. Fifth, the monitoring of training: companies and the government should strengthen their monitoring, and check whether the training program can reach the initial goals.

The strategy for personnel training should be established separately depending on the government and educational institute. According to the demand and educational phenomena of the Chinese logistics personnel, the Chinese government and logistics companies should refer to the experiences of developed countries in forming strategic plans and carrying them out.

For the Chinese government's training strategy, first, the government should establish laws and policies on logistics. Second, it should understand and plan about logistics personnel in a long-term

point of view. Third, it should carry out a logistics certification system for logistics personnel, and improve the quality of personnel. Fourth, it should promote standardized logistics education, and promote a better understanding of the subject to the public, while encouraging companies to recognize and participate in logistics. Fifth, it should accurately predict the supply and demand of personnel and promote balance. For the training strategy of educational institutions, first, as the industry has a complex and mixed nature, universities should establish combined logistics majors, which is also a global trend. Second, it should establish the globalization of school establishment. This is how it can recruit and produce global logistics personnel. Third, it should carry out a diversification of logistics personnel education. This would strengthen professional education and training, while solving the deficiency problem more effectively. Fourth, the invitation of competent teachers and establishment of teaching material: competent teachers train competent personnel, and the basis of corporate growth is its personnel, and the training of personnel is directly related to the development of the company. Therefore, while training logistics personnel, one a whole there should be a caution against an excessive supply of personnel.

The logistics industry is based on personnel, and without talented individuals, corporate success is impossible. Therefore, we should fully understand and research China's future in logistics along with the status of related personnel in the country, and seek to establish valid measures concerning our country's logistics personnel. In order for Korea's logistics industry to develop, we should also consider professional training of personnel and the establishment of training facilities. The training of logistics personnel can promote national competitiveness, and can contribute towards the national economy. Also, the production of competitive personnel can secure the healthy and secure development of the Chinese logistics industry. In conclusion, our companies should continue professional training for current and new employees, and through internal training and certifications, improve workers' capabilities and productivity, promoting the healthy development of the logistics industry.

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