2004 Research Abstracts

Foreword

The importance of human resources development in the knowledge-based society of the 21st century is indisputable. The global economy is moving beyond the period of industrialization and modernization to a period of knowledge and information, globalization and de-modernization. Moreover, considerable structural changes have taken place, especially in terms of labor and capital input and productivity.

In the 21st century knowledge-based economy, the development and prosperity of a nation depends on its innovative capabilities and core competencies determined by knowledge and information. Given this, the development of human resources aimed at raising the knowledge and skill levels of all members of society is essential in strengthening national competitiveness.

Indeed, human resources development is the most important issue facing Korea today. The country needs a new paradigm of social and economic development to achieve sustainable growth and actively meet the challenges of the ever-changing environment at home and abroad. The era of digital globalization demands the Korean society to adopt a new people-centered human resources development strategy.

Leading Korea's path to becoming truly a strong knowledge economy is KRIVET, which is in the forefront of the policy research in national human resources development and vocational education and training. In addition, it carries out extensive research and projects on qualification system, education and training program development, and career guidance and counseling. Its research achievements are published in various forms and the Research Abstracts is just one of them.

KRIVET has, and continues to, build a strong research foundation, based on which it aims to become a global HRD think tank and build an innovative, integrated Korea. KRIVET's 2004 Research Abstracts will provide a glimpse of research undertaken by KRIVET, and an insight into issues and debates concerning HRD in Korea.

It is hoped that this publication will serve as a useful channel of information, especially in better understanding Korea's recent developments and experiences in HRD and vocational education and training.

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Learning from Australian Vocational Education and Training Reforms at the Post-Secondary Level
: A Case Study of TAFEs in South Australia

Kisung Lee

Vocational education has been gradually losing its competitiveness, and industry, academic society, expert groups and parents are asking for its reform. As part of survival strategies, vocational high schools convert themselves into general high schools, change their school names, but in vain. Also vocational colleges are having difficulty recruiting students, which threatens their very existence. So it is necessary to prepare an alternative action to avoid the collapse of vocational education.

Companies are generally not satisfied with their new employees, whether they are vocational high school graduates or college graduates, so they bear the responsibility and cost of retraining new employees. This results in increase in companies' distrust of vocational education institutes. To overcome such discouraging situations, it is necessary to benchmark successful cases from other countries and apply them to formulate policies on vocational education and training.

With this intent, this study focused on Australia, which is renowned for its vocational education and training system, to investigate its ways of effectively and successfully operating the system. Based on the study, implications for improving vocational education and training and basic material useful to reform vocational education and training system in Korea will be drawn.

This study reviewed and analyzed the following: outline of the Australian vocational education and training system, TAFE as a vocational education and training institute, factors affecting changes in vocational education and training system, operation of TAFE institutes, employment and follow-up of the graduates, etc. Based on the results of the review and analysis, implications were drawn on reforms for vocational education and training at the post-secondary level in Korea.

First of all, Australian vocational education and training system is made up of National Training Framework (NTF), which includes Training Package and Australian Quality Training Framework (AQTF), Registered Training Organizations (RTOs), New Apprenticeship, Australian Qualifications Framework (AQF), and so on.

Training Packages in Australia acts as the backbone of the Australian vocational education and training system. Training Packages are sets of nationally endorsed standards and qualifications for recognizing and assessing people's skills. A Training Package describes the skills and knowledge needed to perform effectively in the workplace. As of January 2004, 72 packages had been developed and other packages

are continuously being developed.

The Australian Quality Training Framework (AQTF) comprises of two sets of nationally agreed standards to ensure the quality of vocational education and training services in Australia. The AQTF ensures that all RTOs and the qualifications they issue are recognized throughout the country.

Vocational education and training organizations in Australia are divided into public institutes and private ones, including registered training organizations such as TAFE institutes, private training centers which offer accredited courses, and other training centers offering non-credit courses. There are 72 TAFE institutes, 531 community education providers, and 1,339 other registered providers all over the country.

The New Apprenticeship was introduced in 1998, and is a new approach to apprenticeships and traineeships. The New Apprenticeship is a contract between the New Apprentice, their employer, their training provider and the State Government. It is designed to provide the trainee with the opportunity for structured training and paid work, leading to a qualification that is recognized by employers around Australia.

The Australian Qualifications Framework, commonly known as the AQF and partially introduced in January 1995, is a unified system of thirteen national qualifications in schools, vocational education and training (TAFEs and private providers) and the higher education sector (mainly universities). It has been implemented throughout Australia since 2000, linked with all of the Australian qualifications. It is a highly transparent and quality-assured national system.

Second, the governmental organizations for vocational education and training are Department of Education, Science, and Training (DEST) and Australian National Training Authority (ANTA) at the national level, and State and Territory Authorities and Industry Advisory Bodies at the state and territory level.

Third, the factors driving the Australian Government's reform efforts for vocational education and training system include globalization, changes in the labor market, demographical changes, and spread of information and communication technologies. With these changes, the following vocational education and training reforms were made: renovation of National Training Framework; conversion of training and assessment into competency-based one; liberalization of training market; flexible delivery of training; recognition of prior learning and experiences; and improvement of the Australian Qualifications Framework.

TAFE institutes in South Australia have made great successes in providing quality vocational education and training. And contributing to the success were variety of programs, flexible delivery, autonomous learning paths, close linkage between industry and school, and low tuition and fee. Some of the strengths of Australian TAFE institutes are as follows: a) TAFE institutes are one of the axes of Australian public education and the main bodies responsible for vocational education and training; b) when any of the courses offered by the TAFE institutes are completed, nationally usable qualifications and certificates are given under the Australian Qualifications Framework; c) training contents and required time to complete training programs are standardized through the Training Packages; d) prior learning and experiences are widely recognized and vocational education and training institutes are well articulated and collaborated; e) industry and vocational education

and training organizations are closely linked; and f) every individual TAFE institute is given maximum autonomy and discretion.

Technical and further education in Australia had gained attention from the Government and industry as well, and made efforts to improve and reform the systems to secure competitiveness. Aforementioned literature review and direct interview with directors of the TAFE institutes revealed several strengths of Australian vocational education and training. They also generate some important implications for improving and reforming Korean vocational education and training system.

First of all, Australia takes the initiative to continuously improve and renovate its vocational education and training system. To make it effective and acceptable, the Government adopts various committee reports to shape the national framework for vocational education and training.

Second, not only in South Australia but also in all the other States and Territories the cooperative relationship between industry and vocational education and training organizations and institutes are very tight and close. This close relationship came from mutual understanding and trust for each other.

Third, the Australian Qualifications Framework constitutes the fundamental of the Australian vocational education and training system. In accordance with the provisions of AQF, the nation-wide valid qualifications and certificates can be given to qualified individuals.

Finally, TAFE institutes functions as vocational education and training organizations and lifelong education institutes as well. No matter how old the learner is or where he or she lives, he or she can choose and complete any course they want to take.

Decentralization and Vocational Education

Ji-Sun Chung · Il-Kyu Kang · Hye-Won Kho

Balanced national development and decentralization, which the Participatory Government has taken the lead in implementing, are two concepts that place a heavy emphasis on the development of local businesses and human resources. In order to promote the balanced development of regions, it is necessary to develop human resources in a manner to meet the demands of local businesses. The human resources needed to bring about industrial development are in great part being provided by the vocational education system. The main purpose of this study is to analyze the implications of the decentralization of the administration system of vocational education to improve the functions of regional human resources development as well as the future direction of this decentralization.

Decentralization and Development of Vocational Education

The current local autonomy enjoyed by individual educational administrators has been legally enshrined in the Constitution, Educational Law, Local Autonomy Law, and the Law on Local Autonomy and Education. Moreover, regional human resources development means to foster, distribute, and utilize the resources on demand of the local autonomous entities, educational institutes, research centers and industries. Regional human resources is also developed effectively by carrying out the activities that help form the social norms and networks. In order to promote balanced regional development, local businesses should be developed. What is more, human resources capable of contributing to the development of local businesses can be developed through the vocational education system. In addition, the development of regional human resources capable of meeting the demands of local businesses should be carried out in accordance with the master plan of the national human resources development and the achievement of balanced human resources development. Therefore, the development of vocational education geared towards the characteristics and demands of local businesses can contribute to the achievement of balanced national development.

Decentralization of Vocational Education and Related Problems

The Ministry of Education & Human Resources Development, which is mainly concerned with the formation of educational policy, is responsible for managing vocational education at the central government level. At the local government level, there are currently 16 metropolitan and provincial offices of education nationwide,

each of which is responsible for the implementation of education policies in their respective areas.

Moreover, there are 180 local/regional educational offices nationwide, each of which acts as a sub-administrative organ responsible for the implementation of local vocational education programs. Finally, at the bottom rung of these sub-administrative vocational education organs are the individual schools, which can be regarded as the units where policies are directly implemented. In this regard, there is an urgent need for junior colleges and vocational high schools, where the actual vocational education takes place, to overcome some of the problems they are currently plagued with, including a growing shortage of new applicants.

Furthermore, junior colleges and vocational high schools need to find ways to achieve the following: the reestablishment of their status as vocational education institutes; the specialization of their educational programs so as to contribute more to the development of local businesses; the proper management of the administrative and financial support provided by the central government; and the improvement of their overall efficiency in meeting the demands of the industrial sector in terms of labor skills.

The Ministry of Education & Human Resources Development, as the central organization responsible for leading the development of vocational education policy, should plan vocational education policies while transferring other regular administrative tasks to metropolitan and provincial offices of education. As far as college level education is concerned, there is a need to strengthen the autonomy of colleges over the management of their educational programs.

Meanwhile, the central government's provision of budgetary support to individual school units, which is one of the most important tasks of the Ministry of Education & Human Resources Development, should be increased. Some of the other important tasks that should be carried out by the Ministry of Education & Human Resources Development include: the encouragement of the development of local strategic industries; the management of support policies for vocational education; the mediation of differing opinions among local governments; the extension of financial support and establishment of evaluation systems; the establishment of the legal and institutional foundation to draw local governments' support for vocational education; and the improvement of the public perception of vocational education.

The metropolitan and provincial offices of education, as the main organizations under the Ministry of Education & Human Resources Development, have been responsible for the actual administration of vocational education at the regional level. As such, these offices of education can be regarded as organizations which have implemented the basic principles set down by the central government. The functions of the metropolitan and provincial offices of education include the management of vocational education budgets; the establishment of councils and networks; the reorganization of vocational high school curriculums as well as the management of the linkage curriculum vocational high schools to junior colleges.

However, as these metropolitan and provincial offices of education continue to demonstrate a general lack of specialization, much work still needs to be done in this regard. To improve the present state of decentralized vocational education, it is necessary to strengthen the central government's support and inspection functions. As such, metropolitan and provincial offices of education should be charged with

the following tasks: the provision of government subsidies; management of model schools and educational curriculums; the reorganization of specialized educational curriculums; strengthening of inspection; the strengthening of career guidance for students; and the establishment of an educational cooperation system between vocational high schools and junior colleges. In order for these education offices to carry out the above-mentioned functions, it is necessary to improve the management of each office's vocational educational department and foster specialists to manage vocational education departments within individual offices of education.

Vocational Education Administrative Measures at the Central and Local Government Levels

To assure the balanced development of local businesses, local governments should invest in human resources development and implement the related tasks. However, to date no real understanding of the importance of human resources development and vocational education has emerged. Further compounding matters is the fact that many local governments do not have enough managers responsible for the development of human resources. Even in cases where a sufficient number of managers are in place, many of these individuals lack specialization required in this field. Human resources development policies have been centralized, but the role of local governments in implementing these policies has not improved.

It has also been pointed out that there is a considerable overlap in the functions and roles of the central government and local autonomous entities. To establish balanced national development, local governments should actively carry out their role in implementing policies related to the development of local human resources. By expanding cooperation with affiliated educational organizations, more partnerships should be formed between the central and local governments following the separation of roles, so that local governments can take the responsibility of administering the educational system while the central government formulates vocational education policies.

More concretely, the functions of local governments can be summarized as follows: the development of human resources required by local businesses, as well as the provision of support to human resources development; the strengthening of school-industry cooperation system through partnership-building; the implementation of steps to assure the availability of financial resources; the construction of the infrastructure needed to attract businesses to their regions; and the promotion of the employment of graduates from local school units.

U.S. Workforce Investment Act System and Its Implications

Young-Sun Ra

The Workforce Investment Act of 1998 (WIA) is federal legislation that significantly changed the federal government's approach to funding, overseeing, and providing workforce development services. The Act replaced its predecessor, the Job Training Partnership Act (JTPA), and brought together once separate laws governing services (Wagner-Peyser). Five goals were emphasized: streamlining services through a One-Stop service delivery system; providing universal access to all job seekers, workers and employers; promoting customer choices through use of vouchers; strengthening accountability by implementing strict performance measures; promoting leadership by the business sector on state and local Workforce Investment Board.

This study is designed to review the WIA implementation in terms of the relationship of WIA programs and the federally funded employment and training program, WIA governance and funding, delivery system through One-Stop center; providing training services by vouchers, state-funded training program for incumbent workers and WIA re-authorization issues. This study presents the findings from reviewing WIA implementation and draws implications for Korea's training policies.

Findings

This study identifies 44 programs administrated by 9 federal agencies through provision of a range of employment and training services. These programs service a total more than 30 million individuals and represent a combined $30 billion in fiscal year 2002. By WIA, the mandated 17 partner programs are provided together at One-Stop center in every area over the country.

Although WIA brought together several federal programs, there is no single administrative agency in charge of it. Instead, it promotes linkage among them by reinforcing a governance structure of state and local boards. Because there are no incentives for partner organizations to contribute financially to the One-Stop center, WIA suffer from a shortage of funds with continued divestment of federal government.

Local boards are required to establish at least one One-Stop center, a local point for the provision of all training and employment services and a new role under WIA. Also local boards are required to implement an Individual Training Account (ITA) system to allow the customer to choose from the Eligible Training Provider List (ETPL). Therefore local boards are prohibited from providing direct services, including the newly defined employment supports of core and intensive services,

direct training, and one-stop operation.

The Use of One-Stop Center is at the heart of WIA. Most states gives local boards the flexibility on selecting the One-Stop operators, and local areas usually use two different types of organizations and arrangement in the same area. Core Services are the first one of services available at One Stop Center. Intensive services focuses on dislocated worker customer in particular and are the intermediate step between core services and training services. In an effort to provide more customer choice, WIA mandates that decisions on which training program and provider be left up to the customers for adults and dislocated worker programs. When customers are deemed appropriate for training in WIA, they are issued individual training accounts(ITAs). A customer driven system has the potential to substantially increase training choices for WIA customers. However the system had detrimental effects on the number of providers and adult receiving training. In this study the case of California State Workforce Investment Board, City of Los Angeles Local Workforce Investment Board, Sunvalley Work Source Center, Pierce Community College, Los Angeles Job Corps Center were reviewed.

Almost half of all states fund employment placement and training through employer taxes. After WIA allowed state and local governments to use federal funds for training employed workers, the state and local workforce boards focused their training initiatives for employed workers on training that addressed specific business needs and emphasized workplace skills. In this study the case of California Employment Training Panel ETP) was reviewed.

Initially passed in August 1998, the current law authorizes programs through September 30, 2003. Congress must decide whether to maintain or change funding requirement. Now it is likely to pass a new federal law. The Administration's WIA re-authorization proposal suggests six points: creating a more effective governance structure; strengthening the One-Stop Career Center system; delivering comprehensive service for adults; creating targeted approach to serving youth; improving performance accountability; and providing state flexibility.

Recommendations

Recommendations for Korea's training policies and lessons learned from WIA implementation are the followings: (1) promoting job training investment leadership of Korea's governmental sector; (2) sharing the burden of job training funding between the public and private sectors towards the disadvantaged groups like adult job seekers and unemployed people; (3) strengthening the vertical & horizontal partnerships; (4) promoting private intermediaries in the delivery system; (5) providing substantial training counseling and customer choices; (6) improving training delivery system through employment service centers; (7) designing the stepwise monitoring and quantitative evaluation measures; (8) developing business consultants for in-plant training and employer services programs; (9) promoting job training investment by local government; and (10) linking education and training by modifying credit bank system.

Education/Training and Employment of the Korean Youths

Chang-Kyun Chae · Mee-Souk Kim · Ahan-Kook Kim
Jun-Pil Ok · Mi-Ran Kim

This study aims to examine the transition of the youth to the labor markets. To accomplish this, we divided the youth into different groups depending on the type of educational institutions they graduated from. Then, we analysed their mobility in the labor markets and compared the results between different groups.

More specifically, for the analysis we divided the youth into the following: graduates from four-year universities; graduates from junior colleges; graduates from polytechnic colleges; those who have completed two-year or one-year course at the Human Resources Development Center at the Korea Chamber of Commerce and Industry; those who have completed courses at vocational training institutes; and those who have a high school diploma or lower level of educational attainment.

Data

The dataset for this study was constructed by merging the list of the graduates from 4-year universities, junior colleges, polytechnic colleges and the graduates from HRD Center at the Korea Chamber of Commerce and Industry and from vocational training institutes as of February 2001 with the database for the insured in the Unemployment Insurance Database, and also with establishment dataset in the UID. Using this data, it is possible to track graduates in terms of their mobility in the labor markets.

For graduates from universities and junior colleges, their scores on the Scholastic Aptitude Test have been matched. Further, to obtain the job mobility data on those with high school diplomas or lower educational attainment, 1/12 sample of the youth aged 15 to 29 as of February 2001 was extracted from the database for the insured in UID.

A limitation of this data is that it does not allow to capture the employment status of the youth who are employed in the work places that are not covered by Unemployment Insurance, or those who are self-employed. In addition, as their intention of seeking a job has not been confirmed, it is hard to distinguish the jobless from the economically inactive workforce.

However, the data used for the analysis has strengths. First of all, it does not require a huge sum of money to build the data while the data built offering a sample size large enough to allow various analyses on the quality of employment and also being quite representative of each segment of youth. The data also allows us to utilize the information on the SAT scores and identify the characteristics of education and training institutions with information on job mobility of the graduates.

Major Findings

First of all, one could easily see that the number of those who graduated from universities has been steadily increasing. This growth in the number of college graduates has been criticized for raising the youth unemployment rate. On the other hand, this can be considered as a result of individuals making a reasonable choice of obtaining higher education based on the demands in the labor market.

With regard to labor market performance, there are clear gaps found among youths depending on their level of education. In general, the longer the schooling period, the better the employment results. Those who graduated from 4-year universities enjoy higher employment and higher income compared to those who finished two-year college level education course. In turn, those who graduated from junior colleges enjoy higher employment and better income compared to those who only completed a one-year vocational training course.

Transition to the first job is swifter for those who graduated from training institutions; however, from six months after graduation and onwards, university graduates are more likely to find a job than junior college graduates or those who finished vocational training courses. The long-term unemployment (longer than two years) rate is high among those who graduated from training institutions or polytechnic colleges. The duration of employment at the first job is significantly higher among university graduates than that of junior college graduates or those who completed some training courses at vocational training institutes.

The spell of unemployment during transition from one employer to another is shortest among university and junior college graduates while it is the longest among those who finished vocational schools. The jobless period is also long for those who completed high school.

University and junior college graduates show a strong tendency to join large companies. It is also found that those university and college graduates, who first get a job at a small firm, then tend to move to a large company after accumulating some experience.

Among 4-year university graduates, those who went to schools in the metropolitan areas have a relatively better record of job finding than those who attended schools in the local areas. This is attributable to the fact that talented students tend to choose schools in the metropolitan areas; however, this single factor does not fully explain the difference in the employment performance. The gap can be attributable not only to the imbalance of human resources input at the university level but also the superior educational quality among those schools in the metropolitan areas or the statistical discrimination in preference of those who attended schools in the metropolitan area by companies to those in the local area.

Meanwhile it is confirmed that the entrance examination score is highly correlated with the performance in the labor market. When analyzed with a focus on the current status of employment, graduates with higher test scores find it easier to find a job with a higher wage and the longer the service period. The higher the score is, the more likely to get a good job. But the main impact of this score is clearly found among university graduates while its impact was quite limited among those who finished colleges. This means that the test score signals the capability of one person

but has limited impact on those who attained high scores at the top level only.

The correlation of one's major with his/her employment is not negligible. As for universities, their geographical location, among other features, has a big impact on the job-finding outcome; however, the area of one's major still exerts an influence. For example, one who studied a popular subject in a regional university would find it easier to find a job than the one who studied an unpopular subject in a metropolitan area. In the process of finding the first job, the area of study is found to have a significant impact, along with other factors such as corporate characteristics, personal attributes and even the test scores under control.

Meanwhile, those who studied science and engineering, especially engineering, fail to perform well in the labor market. The employment rate among those science and engineering university degree holders is higher than those who graduated from other fields of study but their wage levels were significantly lower than those in medical area. Their average period of service is much shorter than that of those in the medical or social fields. Their probability of getting a good job is much lower than that of the medical and social fields. For the first job one found after finishing school, those in the medical, educational, or social fields tended to enjoy better wages while those in the science and engineering, especially women in this area, see their first wage level much lower compared with others. For those who studied science and engineering, the average service period is significantly short when the major matches its job type. The ratio of those who studied science and engineering finding the job in the relevant field is only 20% both in the first and current jobs.

However, in case of colleges, the job-finding rate and wage level of those who studied engineering is found to be relatively higher than those who studied other areas. This suggests that the job-finding performance among college graduates who studied science and engineering is better than those of university graduates who majored in the same area.

Research on the Flexicurity of Europe

- Basic Research to Examine the Direction of Future Vocational Training Policy

Weon Ho Jeong

Since the financial crisis in 1998, atypical workers have rapidly increased in number due to increasing flexibility in the labor market. However, these workers have not been protected by the labor laws or social laws. They have been, economically and socially, very unstable. Because the social and political uncertainty factors have increased individual dissatisfaction, there is a need to improve security and flexibility in the labor market.

Since the mid 1990′s, some European companies have executed ′flexicurity′ to satisfy both requests at the same time. Recently, Korea has attempted to recognize this problem little by little. Accordingly, this research was designed to investigate the concept of ′flexicurity′ by reviewing discussions from Europe where the concept of ′flexicurity′ originated, and to identify the concrete process of the flexicurity policy by looking into cases of representative countries which have achieved flexicurity. Further, the core method which achieves flexicurity is to increase functional flexibility. For it, how a vocational training policy had to be executed was examined. Through the review, the available implications for Korea were derived and some political suggestions were recommended in terms of labor market policy, vocational training policy and social dialogue.

Understanding the Concept of Flexicurity and its Achievements

The concept of ′flexicurity′ originated in the legislation process of 「Flexibility and Security Act」 in the Netherlands in the mid 1990′s. Then, the European Union (EU) gradually stressed ′a right balance between flexibility and security′ in the employment guidelines which have been given to the EU member countries according to ′the European Employment Strategy′ started in 1998.

Flexicurity is in general defined as "a policy strategy that attempts to enhance the flexibility of labor markets, work organization and labor relation on the one hand, and to enhance security (employment security and social security) notably for weaker groups in and outside the labor market on the other hand".

However, flexibility means the internal-quantitative flexibility (working hours), external-quantitative flexibility, functional flexibility, and wage flexibility. The word security has various meanings in regards to job security, employment security, income security, and combination security. Hence, flexicurity can be achieved in various forms according to the way those factors are combined. As the major

achievements of flexicurity, it is important to pursue job security by improving the internal (functional and working hours) flexibility for full time workers. Also, we need to identify protective plans through anti-discrimination against fixed term or temporary agency workers, fraud prevention, and an effort to make full time or permanent workers. Besides, labor force moves actively between the state of employment and that of unemployment in a flexible labor market (transitional labor market). Flexibility and security can be synchronically improved with the promotion of transition in the labor market. However, flexicurity can be smoothly achieved only through compromise with conflicting parties. For it, there is a need to make concessions and adjustments between mutual parties by extending the scope of the dialogue and negotiations. Also, 'the coordinated decentralization' strategy must also be considered to reflect requests of various fields.

Case Study of the Flexicurity Policy

The representative countries that have achieved flexicurity are the Netherlands and Denmark. The Netherlands typically has the representative Corporatism model to conduct the policy by mutual consent between social partners. The Wassenaar Accord in 1982 and the New Course Agreement in 1993 became important groundwork for overcoming the economic troubles of the late 1980's. In this process, the Netherlands improved flexibility of the labor market by expanding the part time work force. Recently the proportion of temporary workers have exceeded 40%. However, the government of the Netherlands has gradually guaranteed the same rights for part time workers as full time workers. By doing so it has strengthened the security of the labor market. Now these part time workers are not the weaker group in the labor market. Also, it has relieved the protection of full time workers through 「Flexibility and security Act」 to some extent in the late 1990's. On the other hand, the government has implemented flexicurity by strengthening the security of 'flex-worker' who is temporary workers. Social security has also played an important role. But, the Netherlands has focused on the balance of flexibility and security in the labor market.

On the other hand, Denmark doesn't have employment protection. Thus, it has a flexible labor market where labor force movement is very active. However, Denmark has achieved security through very generous social security whereby unemployment benefits reach 90% of wages. In particular, it has strengthened the active labor market policy to improve worker's employability through the labor market reform in 1994. It classified the period of getting unemployment benefits into a passive period and activation period. Then, it enabled workers to participate in compulsory vocational training during the activation period. It has also adopted the job rotation policy to appoint the unemployed to a post emptied due to paid leave arrangements for childcare, education and sabbatical leave. These policies were enforced based on the mutual agreement between the social partners and government. Thus, the model of Denmark shows high flexibility in the labor market, generous social security, and active labor market policy. This Danish model is characterized as 'a golden triangle of flexicurity'.

Fexicurity and Vocational Training Policy

The core achievement measure of flexicurity is to improve functional flexibility. For it, an improvement of skills is needed. Also, the vocational capability of an individual is required to obtain employment security in the flexible labor market. The improvement of 'Employability' becomes a key point to the achievement of flexicurity. For it, individuals must receive lifelong learning throughout their working life. Accordingly, the vocational training policy must focus on the promotion of lifelong learning.

To that end, EU has suggested six strategic missions; a partnership creation, a consideration of educational demand, easy approach to educational opportunity, creation of learning culture, efforts for excellency, and an acquisition of proper resources.

Policy Suggestions

To achieve flexicurity in the Korean labor market the labor market policy has to focus on the improvement of internal flexibility (functional and working hours flexibility), because flexibility of the Korean labor market mainly has the form of the external-quantitative flexibility. For atypical workers who have largely increased in number, protection through anti-discrimination and misuse prevention will have to be strengthened. Also, the range of the insured of the employment insurance should be widened, and active labor market policies such as the employment stability project and vocational training will need to be given full consideration and actively employed.

In a concrete way, vocational training policy will have to focus on the promotion of individual workers' lifelong learning. The range of workers group which gets subsidies for educational purposes from the employment insurance must be widened. Also, utilization of leave program for vocational education must be actively considered to obtain the time for job training. To accurately reflect the understanding of related parties and to rapidly respond to the changing environment, the cooperation system (partnership) between parties needs to be strengthened. In particular, the publicity, consultation, and education for lifelong learning must be reinforced for the actual participation workers who are the direct beneficiary of vocational training.

To promote social dialogue and consent, which is the prerequisite for the achievement of flexicurity, a culture of voluntary discussion between the social partners must be promoted by sector and region, not through central government initiative. Also, the current government-led management must be sublated in the management of the social insurance which is the core social safety network. The participation of workers and the general public would be of great help to facilitate serious dialogue among all players in the society.

A Strategy to Improve the Curriculum of Vocational High Schools

Jong-Sung Lee · Hyang Jin Jung

The prime purpose of this study was four-fold: 1) to clarify the characteristics and objectives of the Vocational High School Education in Korea; 2) to investigate the factors affecting vocational high school curriculum; 3) to explore the needs for remodeling the curriculum; and 4) to find the directions of curriculum remodeling.

For the purpose of this study, the related literatures were reviewed to investigate 1) the characteristics and functions of the vocational high school education as secondary education, 2) the concepts and the types of vocational high school curriculum, 3) the internal and external factors that affect school curriculum. The intensive interview with high school teachers was also conducted to grasp the current operation of curriculum, and the survey technique was administered to 2,464 major/general subject teachers to explore the remodeling directions of the curriculum. Furthermore, the seminar for 'Exploring the Remodeling Directions for Vocational High School Curriculum' was held with major themes including the characteristics and substantialities of vocational high school education, the internal/external factors and countermeasures affecting vocational high school curriculum, and the perceptions toward remodeling of curriculum.

Results

1) The characteristics of vocational high school education can be defined as the secondary level of education through which people acquire life skills all citizens should have, basic vocational skills commonly applicable to job clusters, and vocational skills related to a specific job in accordance with personal aptitude and nature. Based on the above characteristics, the role of vocational high school education can be seen as to foster the basic vocational competencies adaptable to industrial changes and technological development and technique-skill oriented job performance competencies. Therefore, the objectives of vocational high school education are to cater for students' employability and provide the capabilities to enter higher or continuing education.

2) It is desirable that the structure of curriculum be competency based curriculum or module instruction. The integration and/or removal of faculties in vocational high school should be made in accordance with industrial changes.

3) For the development of basic learning skills among vocational high school students, the units of general subjects, including English, mathematics, and science, should be increased and the contents of those subjects should be related to actual social life and working life. The basic vocational competencies should

include such as those of communication, mathematical principles, problem solving, self-management and development, source utilization, human relations, information, technique, organizational understanding, etc. Those competencies should be strengthened considerably in major subjects as well as general subjects.

4) The flexibilities of autonomous operation of vocational high school curriculum should be secured at the level of individual schools. As for specialized vocational high schools, in consideration of continuity and universality of the job clusters, the focus would need to be on general education and basic vocational competencies at the freshmen level, the common job performance competencies at the junior level, and on the job performance competencies for a specific job at the senior level.

5) The job exploration area in the academic performance test at higher education would need to be composed of those related to basic vocational competencies.

6) For vitalization of vocational high school education, local governments and provincial offices of education should provide administrative and financial support and promote cooperative network among the institutes and authorities in human resources development should be established. Accepting the needs of those institutes, the vocational high school should organize and operate curriculum.

7) Consideration should be given to the integration and articulation between vocational high school education and vocational training.

8) It is desirable that the compulsory vocational qualification test is abolished at the vocational high school education level and, instead, the task-oriented qualification test is administered to the graduates with a certain period of related working experiences.

9) The vocational high school should be able to afford the sufficient and universal equipment and facilities for basic and common practices, while Work Experience and Area Vocational Training Centers can be utilized for students in job preparation.

10) The curriculum should be articulated from a Practical Art at the primary school level, Technology/Home Economics at the lower middle school level, and Technology/Home Economics and intensive elective subjects at the upper middle school level to major subjects at the vocational high school level and junior those of colleges and polytechnic universities.

11) The opportunities and programs of the in-service training for the vocational high school teachers should be expanded and experts in private firms should be utilized as instructers in the form of industry-school concurrent teachers and/or term teachers.

The Current situation and tasks for preliminary vocational education in elementary and secondary schools

Ki-Hong Kim · Ik-Hyun Shin · Jun-Pil Ok

Since the Asian currency crisis, the importance of preliminary vocational education has been more broadly recognised among elementary and secondary schools. Even though the National Core Curriculum(designed for one through ten) deals with preliminary vocational education to an extent, most schools are having difficulty developing and selecting programs and textbooks for preliminary vocational education, since there are no guidelines on preliminary vocational education.

Given this context, this research looked at the present situation of, and the tasks facing, the preliminary vocational education in elementary and secondary schools.

The purpose of the study was to determine the preliminary vocational education required to develop a competent workforce, to define preliminary vocational education through extensive document analysis including taking a phenomenological approach, and Korean and foreign materials on identifying objectives and content elements, as described by researchers and experts. We tried to analyze seven textbooks based on the definition derived. It was also concluded that seven textbooks included preliminary vocational education, but the analysis of textbooks revealed the following problems: ① the absence of a main curriculum for preliminary vocational education; ② the lack of contents and objectives for preliminary vocational education; ③ the lack of understanding of the meaning of preliminary vocational education in the implementation of educational system reforms; and ④ the lack of quality control system for preliminary vocational education. It was concluded that the National Core Curriculum needs to be revised.

Finally, the Delphi method was applied to reach a consensus on objectives and contents of preliminary vocational education among experts comprising of representatives from scholars, researcher, school teacher, policy makers etc. This was carried out twice to collect ideas on what should form the contents of next curriculum to adequately reflect the problems and solutions, the system of supporting policy and social changes affecting preliminary vocational education, and strengthen preliminary vocational education in elementary and secondary schools.

With the consensus outcome, we identified contents that should be included to supplement some items, that is, in character building, construction of curriculum policy, education objectives of school-level organizations, and time of subject changes. It is necessary not only for school teachers and policy markers to change their perception and bring about improvements in preliminary vocational education, but also to make practical and positive utilization of educational media, television, internet, and materials to strengthen and revitalize preliminary vocational education in elementary and secondary education.

Reinvigorating and strengthening the development direction of preliminary

vocational education in elementary and secondary education has significant meanings.

1) As the first step in preparing for vocation, elementary and secondary education was required to upgrade the preliminary vocational education system, which would promote educational competition and social compatibility.

2) The aspects concerning school teachers and students, curriculum and educational method related to preliminary vocational education should be carried out as means to improve profession and quality.

3) The need to strengthen and support the preliminary vocational education system, and to change social perception should be realized as means to assure the importance of preliminary vocational education in satisfying national responsibility, and the needs of individuals and society.

4) It is necessary to transform curriculum to strengthen preliminary vocational education in elementary and secondary education. Items to be reflected in reforming the future National Core Curriculum should be premised on systemic preliminary vocational education.

To solve the problems of education becoming concentrated on liberal education, lowering of quality of preliminary vocational education, and a lack of guidance on vocational direction, all of which have resulted from the weakening of assignment of role and function of preliminary vocational education in elementary and secondary education, the government should devise practical strategies to enhance the preliminary vocational education system, improve profession and quality and assure the importance of preliminary vocational education.

This study gave consequences to research the current situation and tasks for the preliminary vocational education in elementary and secondary school, but it lack suggestions for practical plans to be realized in school education. Future research should place great emphasis on suggesting plans, and developing programs and materials related to preliminary vocational education in elementary and secondary education.

Developing an Evaluation Model for Financial Aid Provision to Vocational High schools

Ki-Hong Kim · Yong-Soon Lee · Jun-Pil Ok

The purpose of this study was to develop a model of evaluation standards for financial aid provided to vocational high schools, which will ensure the continuity and the credibility of financial aid by revising the current evaluation tools, and enhance the rationality of evaluation results.

To accomplish the aim, this study firstly explored various related concepts of school evaluation through review of previous studies and data analysis, and to find suggestions for developing an evaluation standards model for financial aid provided to vocational high schools, this study carried out an analysis of the school evaluation systems in Korea and in the advanced counties including England, the United States, France and Japan. In order to establish the evaluation areas and items by the major field of study, the field interviews with vocational high school teachers were conducted and the Delphi technique was applied in the case of vocational high school teachers, university professors, school inspectors in provincial offices of education, and experts in the school evaluation areas. In addition, a workshop was held to verify the credibility of the evaluation areas and evaluation items, and to develop specific evaluation items by evaluation item and evaluation indicator. Finally, the field simulation was employed to establish the field applicability and the reliability of the evaluation standards.

Based on the results, this study proposed an evaluation system including evaluation directions, evaluation purposes, evaluators, evaluation methods and procedures, evaluation organizations, evaluation periods, evaluation utilization, as well as the evaluation tool that includes evaluation areas with weight values, evaluation standards consisting of evaluation areas, evaluation items, specific evaluation items, evaluation indicators and scales, etc.

The following suggestions were also made to ensure that the evaluation system operates successfully in providing financial aid to vocational high schools.

Construction of Evaluation System and Development of Evaluation Standards Model

The direction of evaluation is set according to the aims, method and outcomes of evaluation to select schools benefiting from the financial aid provided to vocational high schools. And it is suggested that:

1) an evaluation system is constructed in national or provincial offices of education; 2) an evaluation team is formed to achieve specific tasks for the provision of financial aid to vocational high schools; 3) provincial offices of education and

schools are informed of the utilizing method, indicators, process and result of evaluation; 4) provincial offices of education are encouraged to plan themselves the evaluation for selecting those schools to receive financial aid provided to vocational high schools, and each school is informed about this; 5) a database is constructed for evaluation outcomes and a long-term perspective is taken for the analysis of results; 6) the objectivity and reliability of evaluation standards are ensured and indicators reflect project aims and regional characteristics; and 7) preliminary announcement and liability of evaluation are ensured.

Evaluation should maintain rationality, validity and objectivity, as based on the direction of evaluation, and the evaluation processes should be transparent and the evaluations results should be clearly be part of the model for selecting schools to benefit from financial aid.

This study focused on the development of evaluation model for financial aid provided to vocational high schools, since the Ministry of Education and Human Resources Development's subsidy is expected to be transferred toward regional education. Hence, this study developed detailed items and indicators of evaluation to establish areas and items corresponding to the evaluation aims.

It presented four areas and seventeen items of evaluation in support project for enhancing and characterizing of education, and four areas and fifteen items of evaluation for reorganizing school system and school department.

A simulation evaluation was carried out to verify the suitability of the model, made up of areas, items, detailed items and indicators of evaluation developed based on examination of previous related studies and data analysis, expert opinions and expert conferences to reorganize the enhancement and characterizing of education and managing of school system and school department of vocational high schools.

Improvement of the Effectiveness and Utilization of Evaluation and Suggestions

To make the process of evaluation and the use of evaluation results more effective, the following strategies are recommended:

First, to establish consistent plans of financial aid for vocational high schools, there should be 1) short- and long-term plans established for financial aid, 2) well-constructed systems of financial aid for vocational high schools, 3) a guaranteed stable provision of financial aid, 4) a well-maintained balance of distribution of financial aid 5) extended financial aid for regional specializing projects.

Second, to construct and operate evaluation efficiently, there should be 1) pre- and post-evaluation system for financial aid, 2) an operation system constructed for evaluation project centered on metropolitan and provincial offices of education, 3) 'the practical evaluation team' organized in relation to financial aid for vocational high schools, 4) continuous verification of standards of evaluation, 5) construction of database for documents, 6) establishment of areas and items of evaluation and flexibility of distribution of marks, 7) announcement of plans for evaluation, and justification for why evaluations must take place, 8) selection and promotion of evaluators, 9) flexible term of evaluation, 10) easing of problems of discriminative

financial aid, 11) simplified method of evaluation and relating to other evaluations, 12) resolution to the problem in selecting benefiting schools, ensuring that it is carried out based on the outcomes of evaluation, and 13) reinforcement of education according to the outcomes of evaluation.

In implementing the strategies and ways as outlined above, the following are suggested:

1) It is necessary to establish policies for system and evaluation standards organized within government or each provincial office of education to select recipient schools of financial aid for vocational high schools.

2) It is necessary that the evaluation standards of selecting recipient schools are set right from the preparation stage, taking into account of the characteristics of region and project, information for evaluation, and utilization for outcomes of evaluation. And, the evaluation standards and complementations should be established through active and in-depth discussion of resolving such problems as discrimination in the provision of financial aid.

3) The evaluation indicators developed throughout this study should be continuously supplemented and revised.

5) It is process, which is policies related in financial aid for vocational high schools, that is constantly conducted until assuring identification of education.

6) The evaluation model needs to be modified and supplemented based on the outcomes of selecting schools and the simulation of model to understand practical applications.

II. Lifelong Learning and HRD

II. Lifelong Learning and HRD

An Employment Status Analysis of the Retired Military Servicemen

Jong Hoon Kang · Jong-Woo Kim

The main purpose of this study was three-fold: 1) to review the current employment supporting system for the retired military servicemen; 2) to analyze the employment status of those retirees and find differences by personal trait in the concerned areas, and 3) to design ways to enhance employment opportunities for them.

For the purpose of this study, many relevant literatures were reviewed to investigate 1) the employment status and the supporting status of the retired, 2) the operating status of the vocational education and guidance system, and 3) the vocational education and training, as well as supporting system for the retired. Experts meetings consisting of the authorities concerned with the military services, including the Ministry of National Defence, members from the Korea Institute for Defence Analysis, and other related experts, were held to examine study directions, survey instrument, intermediate study results and final study results. Telephone survey technique was administered by the stratified sampling to 1,400 from the retired 5,023 military servicemen registered in the MNDJOB to attain the appropriate data for the employment status analysis. The data were analyzed by the descriptive statistics, and chi-square and regression techniques.

Results

1) The trend found showed that the longer the military service duration of the retired, the greater the possibility of unemployment. The possibility of unemployment or self-employment was also found when the retired tried to get the job relevant to his branch of the service. Furthermore, the retired with higher school education had a more possibility of employment.
2) The retired with a higher reservation wage and a job relevant more to his branch of the service earned a higher monthly wage.
3) 54.6% of the retired had employment in branches irrelevant to the service. A close relationship between employment and a branch of the service existed among the retired from combat branches of the army, with more the service duration, and with more vocational certificates.
4) The unemployed had a higher level of reservation wages than the employed, but with a prolonged unemployed status the reservation wage level

continuously decreased. The prime concern when retiring was job security (54.2%) than military career transition or wages.

5) 63.8% of the retired did not have experience in Vocational Education and Guidance. Specifically, those who retired from the air force, with a subordinate officer rank, the longer service duration, at an older age, and with lower school career did not have experience in Vocational Education and Guidance.

6) Employment information sources consisted mostly of personal sources such as broadcasting, newspapers, relatives and friends, and of sources from the Ministry of National Defence. However, the success rate of finding employment through such assistance averaged around 2.93%. Those who retired with a higher rank demanded more foreign language education, while those who retired with an older age demanded more acquisition of vocational certificates, and those retirees with higher school education demanded more foreign language and computer related education.

Policy Recommendations

1) Career development and management system should be established for military servicemen.
2) An industry-military-school transition system should be established for job creation, and customized education programs should be developed and operated to reflect industry demands.
3) Career guidance programs and supporting system should be developed for the self-guided career design and section.
4) The accessability and quality enhancement of the employment information and supporting programs should be secured.
5) Cooperative system is needed to ensure successful transfer of military service career to the labor market.
6) The diversification of instruction methods such as the on-line education should be devised to develop the skills needed in the labor market with consideration for personal characteristics and demands.
7) Internship programs in firms of the retirees' choice for potential future employment should be activated to enhance social adaptation.

Human Resources Development and Leadership with a Special Focus on Local Governments

Yong Kook Joo · Su-Won Kim · Sun-Tae Kim

The development of local human resources has been seen by local autonomous governments as the key to reforming the regional human resources structure and to strengthening the competencies needed to implement regional projects. The number of policy measures implemented by local governments that have as their goal the education and usage of local human resources, which are rightfully seen as the driving force behind local development, has increased exponentially. This study focused on two aspects of this drive to strengthen and stimulate local human resources development: first, given that this drive to develop local human resources is still in its infancy, this study analyzed the present state of local autonomous governments' human resources development efforts and the future direction of such efforts; second, this study also attempted to identify policy measures to strengthen the skills that the leaders of local governments need to possess in order to effectively implement human resources development projects in their respective regions.

The research methods employed in this paper included a case study and a survey. The case study consisted of an analysis of interviews with 24 managers and specialists from the human resources departments of 12 local autonomous governments, as well as the analysis of other related materials. With regard to the survey, the results of 175 completed surveys, which had originally been sent out to 248 local autonomous governments, were analyzed.

Results

The results of the analysis of provincial and local governments were used to form a comparison of their respective human resources development policies and of their leadership abilities. The main findings of this comparison are as follows:

1) Comparison of the human resources development policies of provincial and local governments

Although both the provincial and local governments recognized the importance of developing human resources, the former was found to focus more on developing human resources as a means of strengthening overall competitiveness, and on using these human resources as the engine of economic growth. On the other hand, the latter was found to concentrate on the development of human resources through such means as the provision of education and training programs.

The responsibility for the development of human resources was found to be

decentralized at both the provincial and local government levels, with this responsibility spread out across several departments.

As far as the problems associated with the development of human resources are concerned, this study found that both provincial and local governments exhibited an inability to properly plan and implement the related policy measures, a shortcoming which can be attributed to the fact that the human resources development policies are still in their infancy at both levels of government. Moreover, this study found that the concerned managers' understanding of the importance of human resources development remains quite basic. Another problem uncovered was that of a general lack of necessary resources, such as specialists, funds, and infrastructure. Furthermore, our study revealed that the partnership between the central government and the departments responsible for the development of local human resources remains rather underdeveloped.

On the other hand, the study also found that certain positive steps had been taken with regard to the development of human resources; these include the establishment of responsible organizations and the formulation of related policies. However, as these human resources development policies are still in the early stages, these positive steps have yet to translate into concrete achievements. Another positive development which was unearthed by this study was the fact that local governments believe that administrative services and the overall sense of community has been improved as a result of the educational and training programs that have been made available to local government officials and residents.

2) Comparison of the leadership skills of the provincial and local governments

On the issue of leadership, our study found that in both levels of government there was a general recognition that policy-makers and the leadership group should possess the ability to formulate the vision, objectives, and direction for such policy; to form a common sense of purpose with all other concerned parties; and to secure the finances needed to implement these policy measures.

This study revealed that at both the local and provincial government levels there is a need for those in charge of developing human resources to possess the following competencies: organizational skills; a keen business sense; ability to formulate a vision and to make decisions; desire to see things through to fruition; resource management skills; persuasion skills; ability to form network linkages; ability to see things through to fruition; specialization; and personnel management skills.

As far as linkages and cooperation were concerned, the study revealed that there is indeed a need for both provincial and local governments to maintain a close cooperative relationship with human resources development managers at the central government level, as well as with those of other local governments.

This study also found that the following factors were crucial in order to assure that the leadership group at both the provincial and local government levels successfully achieve their policy goals: the leadership should possess the competencies needed to formulate the policy vision and objectives; the human resources development policy should be planned and implemented in a systematic manner; the concerned parties should be induced to participate in the decision-making process; and the necessary specialists and financial resources should

be secured.

On the other hand the following factors were identified as currently being detrimental to the leadership groups ability to successfully implement policy: the presence of short term-based policies; the leaderships possession of negative attitudes towards the process; a general lack of input and participation; and a lack of financial resources and specialists.

On the issue of leadership problems, our study revealed that the leadership groups of both the provincial and local governments did not possess a clear-cut vision or direction for their policy-making processes, and that they also lacked the specialists and financial resources needed to support their policies. In addition, provincial governments were found to be attempting to implement regional innovation systems and strategic plans that were not in keeping with their economic situation, while local governments were found to not possess a proper understanding of the nature of a regional innovation system.

As far as the overall objectives were concerned, provincial governments were found to be concentrated on establishing a human resources development system correlated to the National Human Resources Development system, and on using this system to create jobs. On the other hand, local governments were found to be concentrated on extending the number of educational and training programs. Meanwhile, both governments recognized the need to improve the competencies of policy-makers and of the leadership group in order to have them take on a role that more closely resembles that of a CEO.

On the issue of the expectations toward those leaders charged with carrying out the development of human resources, our study found that the leadership group was expected to prepare a support system capable of fostering the development of human resources policy; to secure the necessary finances and specialists; and to construct cooperative relations with those concerned with the development of human resources in the central government and other local governments.

Finally, the following steps were identified as means of strengthening leadership: the provision of educational and training programs in order to develop leadership competencies; the introduction of a leadership certification system; and the construction of a cooperative system among local governments.

Policy Measures for Human Resources Development in the Service Sector

Korea Research Institute for Vocational Education and Training
Korea Institute for Industrial Economics & Trade
Korea Institute for Health and Social Affairs

In order to overcome the recent jobless growth and economic slowdown, and to achieve sustainable economic development, there is a need to upgrade and promote service industries. Service industries increase employment opportunities not only through inducement of additional growth of the manufacturing sector but also through its own growth. Compared to other industries, the competitiveness of service industries is much more dependent on the quality of human resources.

This study analyzed manpower development and supply, and the related government policies of 3 service industries -- business services, health & medicine services and culture industry -- and suggested policy tasks and strategies for the human resources development in the service sector.

Policy directions for HRD in the service sector are as follows: 1) design and development of infrastructure such as information and finance; 2) enlarged provision of education & training opportunities for professionals in individual service industries; 3) human resources development based upon demands from actual service fields; 4) enhancement of support to education & training initiated by the private sector; 5) integrated and efficient policy implementation through systematic networking among related actors.

On the basis of the above policy directions, the following policy tasks are discussed. 1) establishment and operation of information & statistics systems for the service sector at a national level: ① establishment of systems for gathering, analyzing and disseminating data and information on service industries, and designation of an institution responsible for the job, ② development of manpower demand & supply forecasting system and manpower map; 2) diversification and specialization of training programs for professionals in individual service industries: ① development of training programs for professionals tailored to each service industry, ② program enrichment in 2-year junior colleges and universities, ③ introduction of accreditation for education & training programs and work-based training system, ④ development of training program for cultivating generic skills and launching new businesses; 3) reeducation and retraining of incumbent workers: ① development of programs for upgrading professional knowledge & skills, ② greater support to SMEs and temporary/part-time workers; 4) implementation of HRD programs initiated by the private sector: ① strengthening of cooperation between sector councils and training institutes, ② increase in government support to sector councils and enterprises actively participating in HRD programs; 5) improvement of qualification system for service industries: ① improvement of

transferability of qualifications in the international market, ② introduction of national skill standards.

Strategies for implementing the above policy tasks are as follows: 1) organization and operation of 'Sector HRD Council' in individual service industries and departmental council for each major area in colleges and universities, 2) formulation of a master plan for HRD in the service industries at a national level, and 3) establishment of an implementation system for HRD policy in service industries.

Manpower Demand Forecasting

Chang-Won Jang · Sang-Don Lee · Yeo-In Yoon

In the knowledge-based society of the 21st century the competitiveness of one economy is centrally determined by human capital and knowledge. It is necessary to have accurate creation and generation of statistic indices and information about education and labor in the construction of a human resources development policies system. Given this necessity, manpower demand & supply estimation is a very important issue for basic HRD policy. Such estimation methodologies are mainly divided into 2 ways of quantity and quality, the one is model specification technique and the other is market signaling technique. These 2 ways have been debated on usefulness. Because the objective of the model specification technique is to estimate the precisive number of manpower, it has the advantage of being transparent. However, due to the errors in the estimated forecasting, the international organizations like the World Bank recommend using the estimation attained based on market signaling technique.

Against this backdrop, the central focus of this research was to estimate the mid-term (by 2010) industry×occupation manpower forecasting with using model specification technique and market signaling technique in the Korean labor market. For manpower forecasting, the classification of industry data used included second-digit level of the SITC, and occupations were divided into 4 groups (high skilled clerical workers, low skilled clerical workers, high skilled production workers and low skilled production workers). For those 4 groups, the investment return by educational attainment and industry was measured using Mincer's wage function. Based on this, a comparison was made with the average investment return of education for all industries, and for all occupations to estimate any surplus or shortage in the supply and demand for manpower in the sectoral labor market. In addition, a comparison with the market return allowed whether individual workers had made investment in human capital and this helped determine the degree of manpower supply and demand.

And then this study tried to link model specification technique with market signaling technique to evaluate the credibility of the outcome. However, this linking trial study is only a first step and, because it had limited data and any other problems, future studies need to be undertaken continuously are necessary to link quality with quantity estimation.

Included in the appendix are the forecasts for the supply and demand of manpower based on the 10 future economic growth engines. This appendix table will help human resources development policy makers and related interested parties as future information.

Finally this study suggested policy issues for human resources development. This study placed a particular emphasis on higher education policy which was the fixed

capacity number coordination issue. If the departments of universities provide excess supply of graduates relative to labor market demand, these fixed numbers should be coordinated. The problems of skill-mismatch and asymmetry of labor market information were also raised. Other policy issues raised in the study concerned problems associated with time series data and creation of essential data, and methodology development for manpower forecasting, linking quality with quantity for evaluating results, etc.

Aging Society and Industrial Education and Training

You Mi Son · Jae-Kyung Lee

This study was to investigate new policy direction of industrial education and training in light of aging societies. Korea is one of the fastest aging countries in the world and there are concerns about the effect of aging on the economy, finance, welfare, and the labor market. This study starts from the necessity of field research and integrity of policy on aging.

One purpose of the study was to shed a useful light on the issues surrounding aging for different industries and the other one was to help settle disputes on lifelong-learning policy for employability of aged workers. Accordingly, the ultimate goal of the study was to explore the fundamental direction of new industrial education and training as well as the motivation for education and training of workers. The underlying argument is that improvement of employability is essential not only to maintain working life but also to develop the quality of working. In addition, corporations, unions, and governments should take more responsibilities for improving employability of aged workers.

This study focused on the steel industry and looked at aging among workers. Also, this study examined the case of industrial education and training at POSCO. The methodology used for the study included survey, field study, and interview as well as seminars and workshops.

Some of the results of the study are as follows: Survey results indicate aging has a critical effect on aged workers, who will retire, for it is related to livelihood to individual workers. Corporations, on the other hand, face labor shortage, increased labor costs, lower productivity and difficulty in improving skills. There were significant differences depending on the size of corporations, with smaller corporations suffering from lack of labor, while larger ones are more burdened by increased expenses.

Policy Implications for the Steel Industry

First, corporations should invest to areas directly relevant to productivity and in programs preparing workers for retirement Governments and individual workers should also participate and collaborate with each other.

Second, it is necessary to have education programs for the top management aimed at developing perception of education and training, as having such awareness affects opportunities of education and training provided to aged workers.

Third, the needs of labor union for field training and skill formation should be reflected in decisions concerning industrial education and training, and in linking training to employment. There is an important policy implication in the finding

that closer partnership between corporations and unions generates more education and training opportunities for aged workers.

Fourth, corporations should recognize that by supporting the about-to-retire workers, they can ultimately raise productivity.

Lastly, for small- and medium-sized enterprises, governments need to support the linkage between corporations and regional universities in promoting self-directed development of aged workers.

Survey on Adults' Key Competences: OECD ALL Survey

Eon Lim · Dong-son Choi · Jee-hee Choi · Eun-jin Oh

Despite the wide agreement on the importance of key competencies in the changing society components, in-depth studies that investigate and analyze adults' key competencies or core skills, which are required in their daily lives as well as in the workplace, have not been carried out to date. Therefore, this research was aimed at assessing Korean adults' literacy and life-skill levels to provide a wide array of information about the state of vocational education in Korea. The Adult Literacy and Life Skills Survey in Korea is expected to show implications on human resources development policy at the national level, showing potential significance of this research.

One of the main objectives of the ALL Survey in Korea was to estimate the status of Korean adults' with regards to key competencies needed in their personal and professional lives, competencies, such as prose and document literacy, numeracy, and problem-solving ability. Another objective was to analyze factors that influence their literacy and life-skills.

The results of the ALL survey in Korea will have the following implications in policy-making:

First, by assessing the international status of Korean adults' literacy and life-skills, the results of the ALL survey in Korea will help establish a national human resources development policy and determine the implications of such a policy.

Second, the results of the ALL survey will have far-reaching implications for the establishment of a vocational training policy for the adult workforce in Korea. The ALL survey will provide much information that will help ascertain the basic competencies that need to be developed by the adult workforce in the near future. This information will also be used to improve the training objectives, training contents, training methods, and evaluation of the results of training programs offered by vocational training organizations for the adult workforce.

Third, these results can be used to improve the school curriculum by facilitating the school-to-work transition. Given the current situation in Korea, where the government provides guidance for primary and secondary school units in managing their curriculum, the ALL results could be integrated into the curriculum to further strengthen key competencies. This, in turn, will serve to strengthen the schools' ability to help students prepare for their future careers.

The target population of ALL includes all non-institutionalized 16~65 years old citizens residing in Korea during the data collection period. Since the enhanced ALL design that involves problem-solving skills was chosen in Korea, the success rate must exceed 5,400 samples. The sampling design for the ALL study is the stratified systematic cluster sampling.

To carry out the ALL Survey in Korea, original instructions and questions were

translated into Korean. The preliminarily translated version of the task booklets was reviewed on several occasions by the research team. For example, several errors in translation were found during the pilot testing procedure of scoring the task booklets. The statistical results, provided by the Statistics Canada, were useful for analyzing the appropriateness of the translation. Furthermore, in conjunction with Statistics Canada and Educational Testing Service (ETS), the research team re-analyzed the translated version's appropriateness to see whether it was in keeping with the original source, and re-analyzed its confidence level by checking to see if it was consistent with the Adaptation Guideline suggested by the OECD.

About 105 interviewers was hired for data collection. About 51 cases were assigned to an interviewer. The interviewers had 8 hours of training sessions regarding the interview procedure according to guidelines produced by the ALL Project managery group. The interviewer training program was held six times by regional groups. To correct the errors that occurred during the interviewing process, re-education of the interviewers occurred in the beginning of the field survey process (about 4-5 weeks after the initial field survey).

The monitoring staff of the survey company monitored the interviewers' work on a daily basis by phone. In addition, the monitoring staff of the project manager team participated and observed the interviewers' work for the first two weeks of the main survey.

Manual data capture method was used to input the completed answers to the background questionnaire and task booklets. To minimize the errors that could emerge during the data processing stage, the PUNCHING PROGRAM developed by Mediaresearch was used.

To score approximately 5,400 cases, 5 scorers were selected. 3 of these scorers will have taken part in the implementation of the preliminary survey and 2 of the scorers will have good Korean and English language proficiency. The scoring was carried out in a manner in which, based on random separation, each scorer will score 28 different booklets. This is to prevent any scorer from scoring only one of each prose and document literacy, numeracy, or problem-solving ability sections.

Currently(December, 2004), data cleaning is being processed. Data files will be created according to the International Record Layout (IRL). In the file, each of the respondent's answers will be recorded on a different line. The random sample of 50 questionnaires will be used to confirm whether the captured data is matched exactly with the responses of the completed questionnaires. In addition, by implementing a frequency analysis of all the variables, the research team can make sure that these frequency analysis results fall within the range of the IRL standards. The data file will be created as an ASCII or SPSS file to facilitate its submission to the ALL Management Group. A document recording all the difficulties experienced during the survey process and any other matters related to the data processing will also be submitted.

To extrapolate the sampled data towards the population, four different kinds of weights will be calculated: sample design weight, non-response adjusted sample weight, benchmark weight and Jackknife weight.

Comprehensive Learning Society and E-Learning

Kyeong-Jong Kang · Myung-Hee Jang
Byung-Wook Lee · Soung-Youn Kwon

The importance of lifelong learning has been emphasized and the main stream of learning society has been changed due to the advent of knowledge-based society and the improvement of information technology (IT). An exemplary existing definition of learning society was the society in which people could do continuous-learning voluntarily and independently through their whole lives in pursuit of self-realization, improvement of living, or acquisition of vocational knowledge and technology (Lee and others, 2000).

Kim (2004), however, proposed a concept of comprehensive learning society (CLS) and presented a new direction of learning society. The CLS suggested by Kim(2004) is a society in which lifelong learning systems have been constructed at individual level, learning systematization at organization level, and learning network at individual-organization level.

Even though the terminology of CLS has not been verified and established academically, the concept of CLS needs to be newly established and embodied when proposing a direction of a new learning society accompanied with circumstantial changes.

Meanwhile, with the advancement of IT, the importance of e-Learning has recently increased considerably and is being applied in industrial education. It is expected to become a useful tool in providing learning and network necessary for CLS.

This study investigated the concept and the characteristics of CLS and probed the possibility of how e-Learning can be applied and embodied in CLS, models of CLS, and support plans for CLS.

CLS and Concept and Characteristics of E−Learning

This study made a literature review of the concepts of learning society, learning city/region, learning organization, and learning community as discussed in the existing theories of learning society. Those concepts emphasize practical learning in organizations, communities, and nations, which are beyond individuals. However, those concepts seem to lack discussions beyond the methods offering learning opportunities to individuals in systemizing and putting those concepts into practice.

The CLS focuses on organizational and societal learning, which have not been discussed in the previous discussion, and beyond individual learning. The CLS in this study is an ideological term, which presents the directions, which lifelong learning and human resources development (HRD) should take in a knowledge-based society. At the same time, the CLS is a term presenting a

framework, which analyzes the present status of lifelong learning in a knowledge-based society. The existing body of learning society theories is ideological and normative. The CLS, however, is a concept which encompasses the frameworks and perspectives diagnosing and analyzing how lifelong learning can be put into practice at a societal level to achieve an ideology of lifelong education as well as the objectives of HRD.

Meanwhile, e-Learning is a learning system in which knowledge production, expansion, sharing, and application are accomplished through exchange of knowledge between different individuals, between individuals and organizations, and between different organizations with the use of computer-based technologies, which are in great demand in a society that needs continuous knowledge acquisition and creation.

E−Learning in Korea

The status of e-Learning in Korea was reviewed in three areas: school education; industrial education; and lifelong education. E-Learning is operated in each area of school, industrial, and lifelong education. But it takes on several different forms in each area of education. In school education, e-Learning is understood as ICT-applying education or on-line education. Internet communication training was the main form of e-Learning in industrial education, and cyber-university and the school of distance learning were the principal forms of e-Learning in lifelong education.

Each governmental department prepared various policies, systems, and legislations to promote e-Learning. However, the concept of e-Learning and the approach to e-Learning depended largely on governmental department.

Case Studies of CLS and E−Learning

Representative learning organizations in companies and lifelong learning cities in communities were selected as case study because there were many limitations in identifying substantial forms of CLS in the scope of overall society. Through case study, the following six aspects were suggested as important in embodying CLS: policy/system/strategy; culture/atmosphere/perception; leadership; network; IT system; and partnership.

E−Learning Model and Support Plan for Embodying CLS

Based on the suggestions extracted from the current status of e-Learning in Korea and the case study, we examined the possibility of how e-Learning can be applied to embody CLS and we also studied a model and a support plan for embodying CLS.

In the CLS, e-Learning can take charge of several roles such as social knowledge

archive (to digitalize various knowledge, to accumulate, and store the knowledge), social knowledge network (to make connections among main bodies of knowledge production and application through networking), and social knowledge distributor (to distribute and diffuse knowledge possessed by specific classes to the general public and the minors). At the same time, e-Learning can be in charge of other roles such as in building a learning community (to prepare communication tools among members of society), molding a learning culture (to diffuse learning atmosphere in the world at large), and in expanding social knowledge (to expedite social learning).

Lastly, a proposed e-Learning support plan for embodying CLS is as follows:
a. To strength policy connection between the central and local governments.
b. To enact a law unifying several laws related to e-Learning.
c. To support and raise perceptions of the decision-makers toward learning.
d. To systemize how to offer educational opportunities for cultivating ICT application abilities.
e. To secure and activate various channels of communication.
f. To construct a social KMS and to operate it coordinately.
g. To construct a policy consortium among ministries related to e-Learning.
h. To construct a balanced network among related ministries.
i. To secure IT system in all levels of government.
j. To connect e-Learning system to other systems in an organization.
k. To recognize various learning experiences and introduce a supporting system.
l. To construct a knowledge sharing culture.
m. To promote learning festivals for dissemination of learning culture.

Effective Acquisition and Deployment System of Military Human Resources

Jung-Pyo Lee · Yoon-Hee Park · Byung-Wook Lee
Ueung-U Nam · Hyo-Sun Park

The purpose of this study was to provide policy directions and assignments that should be pursued for the improvement of military acquisition and deployment system to develop and utilize military human resources efficiently. To accomplish this purpose, firstly, we reviewed the internal and external environmental changes needed to improve military acquisition and deployment system. Secondly, the operation status of military acquisition and deployment by Military Manpower Administration(MMD) and Army were analysed. Thirdly, the military acquisition and deployment systems in Israel and United Nations were reviewed. Fourth, the perceptions and needs of soldiers toward the current status and problems of the military acquisition and deployment systems were surveyed. Lastly, the policy directions and measures to improve the military acquisition and deployment systems were suggested.

This study executed analysis of literature and materials, expert councils and discussion meetings, questionnaire surveys, and interview surveys.

Current Status and Problems of the Military Acquisition and Deployment System

Supply and demand management system

Firstly, the Military Manpower Administrations system is not very effective in managing human resources according to their aptitudes and predicting the aptitudes and skills of the future servicemen. There is an imbalance between availability of and demand for human resources.

Secondly, the plans for the manpower supply and demand are drawn up annually. Thus, human resources are not efficiently provided to the place where they are needed.

Classification of aptitudes and special skills

The aptitudes of servicemen are classified to match their aptitudes and their divisions. Their special skills are also classified to effectively assign human resources to the place where they are needed.

Firstly, the army classification of special skills are different from that of the Military Manpower Administration.

Secondly, the socioeconomic changes are not reflected in the aptitude classification

system.

Thirdly, the difference in the time of the aptitude classification and the time of the enlistment cause more costs.

Fourthly, in the process of conscription and classification of special skills, the aptitude tests and formal interview or counselling needed to accommodate individual needs and wishes are not conducted.

Policy Directions and Measurement of the Improvement of the Military Acquisition and Deployment System

Basic directions

○ Making the maximum use of potential capacities of individuals
○ Actively utilizing supporting human and material resources in society
○ Strengthening efficiency of acquisition and deployment of military men
○ Strengthening military services centered on military men
○ Supporting individual ability development through life-span
○ Enhancing social equity under the draft system

Measures for improving the military acquisition and deployment system

Improvement of the military demand and supply system
○ MMA needs to recruit and manage soldiers nationwide
○ MMA and Army needs to construct the military acquisition and deployment system to support individual ability development with seamlessness through lifetime by predicating the enlistment time and job areas before they enter the army.
○ Army needs to formulate the period of service flexibly to acquire qualified manpower and enlarge the recruitment system to actively secure soldiers with diverse special abilities.
○ Army needs to diagnose the problems and evaluate outcomes of the recruitment system.
○ Army and MMA needs to change the soldiers acquisition system gradually from dual system, namely, draft and recruit system, to an integrated system and formulate the unified acquisition system without classifying Army, Navy and Air force.

Improvement of the aptitudes and special skills classification system
○ MMA's aptitudes classification criteria needs to be integrated with Army's special skills classification criteria.
○ There is a need to have reclassifications take place by examining the feasibility and the appropriateness of the aptitude-classification system to reflect the socio-economic changes in the knowledge-based economy.
○ Guidance and counseling or interviews need to accommodate the needs and wishes of enlistment resources.

Improvement of recruit training system and special skills training system
- ○ The recruit training system needs to be improved and recruit satisfaction survey needs to be implemented.
- ○ The relevance of special skills training needs to be enhanced and investment in training equipment and facility for practical training is necessary.

Rebuilding military job specifications system
- ○ The military job specifications system needs to be rebuilt through job analysis to modernize and build top military.

Strengthening military public relations and information system
- ○ Such military-related information as the methods and procedures of recruit, training and deployment needs to be actively provided.
- ○ The military service support systems for raising the level of satisfaction among recruits needs to be enhanced.

Building military career development and management system
- ○ A military career record system needs to be developed to make a record of the military education and training outcomes, self-development activities, certificates and licenses, and job competencies achieved during the military services to support the smooth transition from military to work.
- ○ A vocational guidance and information system needs to be built to support career development of the military human resources.

Efficient acquisition of military human resources through introduction of assessment and recognition system
- ○ Training program undertaken during the period of military services needs to be assessed and recognized.

Policy Measures for Human Resources Development in Business Services Industry

Sung-Joon Paik · Sang-Don Lee · Yeo-In Yoon

Business services play a central role in increasing the productivity and value-addedness of other industries. As one of the key knowledge-based industries, the competitiveness of business services is heavily dependant upon the quality of human resources creation and knowledge utilization. While business services in Korea has grown by 23.3% on annual average in terms of value-added created, it has had problems such as a mismatch between manpower demand and supply and a shortage of in-house education & training opportunities due to the large proportion of SMEs.

This study analyzed changing trends of business services, manpower development & supply, and related government policies in the 7 areas of business services -- IT information, advertisement, law, accounting, marketing and public opinion research, management consulting and design, and suggested policy tasks and strategies for the human resources development in the business services industry.

Policy directions for HRD in business services are as follows: 1) diversification and specialization of education and training opportunities for professionals in individual business services area; 2) human resources development based upon demands from actual service fields; 3) design and development of infrastructure such as information, finance, organization etc.; 4) enhancement of government support to education & training for SMEs in business services.

On the basis of the above policy directions, the following policy tasks are discussed. 1) development and operation of programs for training and retraining professionals in individual business services areas: ① development of training programs for professionals tailored to individual business services industries, ② securing competent teachers & trainers, ③ strengthening the linkage between training programs and qualifications, ④ development of reeducation and retraining programs for upgrading professional knowledge & skills of incumbent workers, ⑤ development of training program for cultivating generic skills, ⑥ introduction of accreditation for education & training programs in individual business services area; 2) implementation of education & training programs based on industry-education cooperation: ① strengthening cooperation between education and training institutes, and sector councils, ② provision of incentives to enterprises participating in the industry-education cooperation programs; 3) establishment of systematic and effective in-house HRD systems in enterprises: ① organization of a HRD unit within each enterprise or appointment of HRD personnel, ② provision of diverse retraining programs for incumbent workers, ③ development and implementation of career development plans for individual workers; 4) establishment of information system for HRD in business services: ① setting-up of a DB for professionals and related

institutes in each business services area, ② building-up of manpower forecasting system; 5) improvement of the qualification system for each business services area: ① revision of a national qualification system, ② preparation of a new qualification system for international transferability; 6) provision of financial and administrative support to SMEs.

Strategies for implementing the above policy tasks are as follows: 1) organization and operation of 'Sector HRD Council' in business services area, 2) formulation of a master plan for HRD in the business services industry at a national level, 3) systematic linkages and coordination among related policies through the 'Ministerial Meeting for HRD,' 4) government incentives, and 5) scientific monitoring and evaluation of policy implementation processes and results.

A Study on the Evaluation Model for Human Resource Development in SMEs

Mee-Souk Kim · Euikyoo Lee · Yong-Kook Joo

In recent years enterprises have begun supporting vocational capability development, education and training courses and/or employee lifelong learning. By building such an organizational system as an enterprise human resources development system, it is possible to explore direct education and training support for employees and/or education and training courses, as well as systematic and structural approaches to constructing the infrastructure for consistent and systematic human resources development. This research suggests a nation-wide evaluation model to generate benefits for both enterprises and individuals.

Human Resources Development Systems in Enterprises

There are several systems related to the construction of HRD systems in enterprises such as IIP in Great Britain, PD in Singapore and HRD system analysis and evaluation in enterprises and education and training consulting in Korea.

However, many SMEs are unwilling to participate in such recognition systems due to: the fluidity of human resource in SMEs; the difficulty to establish a long-term business plan for SMEs; and lack of knowledge in HRD.

For recognition, nation-wide standards should be developed and applied widely and supported for SMEs should be considered.

The Ministry of Labor's project on HRD in enterprises intends that government supports enterprise human resources development to promote steadfast business management. The project was mainly about analyzing the business environment and business conditions, unmatched factors between human resources development, business performance and corporation strategy, and about proposing solutions to improve enterprise competitiveness.

Education and training system consultation by Minister of Commerce, Industry and Energy which aims to strengthen the industrial competitiveness through systematic HRD in SMEs is supported by the national treasury to form individualized education and training systems.

These projects by the Ministry of Labor and the Ministry of Commerce, Industry and Energy are similar to each other in that both promote the construction of enterprise HRD system, but the approach taken by the Ministry of Labor is generally concerned with enterprise-wide business management such as HRD, HRM, leadership, and link with performance, while the Ministry of Commerce, Industry and Energy's education and training consulting is focused on education and training plan, program development and implementation of various HRD factors.

This research has analyzed the effect of constructing HRD system, which has been implemented by the Ministry of Labor and the Ministry of Commerce, Industry and Energy, based on case studies and experiences, and especially what factors influence the establishment of a HRD system.

Enterprises are unwilling to establish a HRD system if the value of the system is not likely to be fully conceived or they are doubtful that such a system will actually bring about positive effects or changes to their business. Therefore, it is necessary to analyze the effect of building a HRD system on businesses and make sure that businesses take advantage of it.

The factors related to the construction of enterprise HRD system are used as independent variables, and productivity, education and training investment, effectiveness perception are considered as dependent variables.

To avoid being misled to explain the correlation between dependent and independent variables in terms of causal-effect relationship, this research analyzed the effect of enterprise HRD system, found meaningful standards through analysis of relationship between factors, and established an evaluation model.

The results suggest that establishing enterprise HRD systems brings about an increase in productivity, an increase in education and training investment and organizational change. Also it seems to emphasize the importance of establishing HRD system and simplifying the evaluation model to suit the characteristics and conditions of SMEs

A Study on the Transformation of Higher Educational System for Reinforcing the Linkage between Education and Work

Tae-Joon Park · Ik-Hyun Shin · Hyung-Man Kim

The demand for higher education has increased sharply, in general, due to socioeconomic developments in modern world. Such expansion has taken place within higher education market in Korea, too. However there is widespread disapproval among business leaders of the students' academic experiences. There is no real accreditation between higher education and business organizations. We －national research bodies, higher education communities and alike － have tried hard, through extensive research and policies, to reinforce the linkage between higher education and work. Nevertheless, business organizations' distrust in higher education has only deepened.

This became our starting point, the point of distrust between higher education and work, and the assumption was that such mistrust has not derived from higher education or from business organizations, but rather it was a problem concerning a certain linkage. Our purpose of this research was to analyze in various ways the questions concerning the higher education structure, exploring the underlying causes and the nature of 'distrust'.

We first established an intermediary system of work and academic learning for reinforcing the linkage between education and work. Second, we proposed to develop academically-approved work experience and effective learning systems, unifying special degrees and vocational qualifications, creating many different kinds of special degrees, and ensuring the accreditation of special degrees through strict academic evaluations.

III. Skill and Career Development

III. Skill and Career Development

Surveys on Adult Basic Workplace Skills Programs

Jung-Pyo Lee · Yoon-Hee Park
Sun-Hee Hong · Seung-il Na · Byung-Wook Lee

The purpose of this study was to survey basic workplace skills programs of adults in Korea and suggest development directions to improve the basic workplace skills of adults. To accomplish this purpose, first, the concept and importance of basic workplace skills were reviewed. Second, the domains and elements of basic workplace skills were specified to analyze the operation status of programs. Third, policies and support systems for fostering basic workplace skills among adults in England, Australia and Japan were reviewed. Fourth, an analysis was made of the adult basic workplace skills programs operating in enterprises, higher education institutes, education and training institutes at large in Korea. Lastly, the policy directions and measures to improve adult basic workplace skills were proposed.

Concepts and Importance of Basic Workplace Skills

Basic workplace skills, also known as employability skills, generic skills, core skills or key competencies are those skills essential to gain employment and to progress in employment throughout one's lifetime. In today's knowledge-based economy, basic workplace skills are regarded as essential in forming human capital and social capital. They are developed throughout one's lifetime and can be acquired at work.

Defining and Specifying of Basic Workplace Skills

Basic workplace skills are known by a number of terms and there are many different lists of skills in OECD member countries and in Korea. However, the common elements of basic workplace skills were defined to analyse the adult basic workplace skills programs as follows.

Common elements of various listings of basic workplace skills

① Communication skills	• understanding materials • writing skills • listening skills • presentation skills • basic skills in foreign languages
② Problem solving	• thinking skills • decision making
③ Self-development skills	• self-awareness • self-management • career development
④ Interpersonal skills and attributes	• teamwork • leadership • conflict-management • negotiation • customer service
⑤ Information technology	• computer application • data processing
⑥ Work ethic	• work ethic • community ethic

Adult basic Workplace Skills Programs in England, Australia and Japan

In England, core skills initiatives were aimed at the 15 to 19-year-old age group, new entrants to the workforce. The core skills were intended to be integrated into national vocational qualifications and into higher school education courses, and to be assessed as parts of the those courses, rather than to become the basis of specific courses themselves.

The Australian industry group proposed a set of employability skills for high-performing companies and developed the employability skills framework in 1999. Recently, efforts have been made to incorporate employability skills into training packages. Australian higher education institutes have also implemented the 'Graduate Skills Assessment' to foster the development of employability skills among university students.

The Japanese government has introduced Youth Employability Support Programs (YES-program) to reduce youth unemployment in 2004. According to enterprise survey results, communication skills, work values, basic academic skills, business manners etc. were identified as employability skills needed for high school graduates and graduates of higher education institutes in the field of business and management.

Analysis of the Current State of Adult Basic Workplace Skills Programs

Surveys on basic workplace skills programs were carried out in the forms of questionnaire survey, in-depth interview and observation of participation in selected

programs. A questionnaire survey was conducted for a total of 77 large enterprises and interview surveys were conducted for 14 education and training institutes including in-service training institutes of large enterprises and small and medium enterprises, private professional education and training institutes, colleges and universities, public adult learning centers and etc.

According to survey results, over 80% of respondents in large enterprises answered they have been implementing adult basic workplace skills programs and 10% answered that they have plans to implement such programs. Respondents said they have been implementing interpersonal skills and attributes (93.5%), communication skills (93.5%), IT skills (82.3%), problem-solving (72.6%), work ethics (58.1%), and self-development skills (54.8%) as basic workplace skills programs. Respondents answered that basic workplace skills are very important essential skills for the development and improvement of job competencies and improvement of productivity of organizations. In relation to these results, over 50% of respondents answered that basic workplace skills should be learned in schools from early childhood and in college as well as at work throughout lifetime. Nevertheless, it was perceived that employers and employees will not willingly invest their time and money to foster basic workplace skills because the visible effects of basic skills are not as noticeable as professional skills.

26.8% of respondents answered 'lack of motivation for learning' and 25.0% responded 'lack of professional lecturers and facilities' as obstacles in implementing programs. Especially small and medium enterprises, higher education institutes and adult learning centers have difficulties in developing and managing basic workplace skills programs due to the lack of development capacity and professional manpower.

Policy Directions and Measures to Improve Basic Workplace Skills of Adults

1) The government needs to establish a support system for developing basic workplace skills for all Koreans throughout their lifetime.
2) The government should design short- and long-term plans to improve basic workplace skills for all, and carry it through systematically.
3) The government needs to raise motivation and increase the access to opportunities to foster basic workplace skills and to construct the assessment and recognition system for basic workplace skills.
4) The government needs to establish an exclusive setting for developing and distributing high quality basic workplace skills and introducing best practices.
5) Creative and highly qualified basic workplace skills programs need to be developed to improve learning conditions and environment to raise the effects of learning.
6) The employment insurance system needs to be improved to flexibly adapt to the changing enterprise environments and learning delivery system to invigorate basic workplace skills programs.
7) Partnerships among stakeholders need to be established to facilitate basic workplace skills programs effectively and efficiently.

Work Organization and Skill Formation
- the Case of ICT Service Sector in Korea

Hong-Geun Chang · You Mi Son
Su-Won Kim · Sung-Kuk Chung

This research was conducted to examine the state of knowledge workers' work organization and skill formation in the ICT (information and communication technology) service sector, and to find out a desirable skill formation model for those workers. We conducted a survey on work organization and skill formation in the ICT service sector, in which 605 R&D personnel and technical engineers from 97 ICT service companies participated. In-depth interviews were also carried out with some of them.

We first looked at the ICT service market and human resources situation in Korea. We then examined the realities of work organization and skill formation as well as industrial relations in ICT service industries before analyzing how these factors affect the performance of the organization. Based on the results, we drew implications and proposed some suggestions.

Characteristics of Work Organization

Work organization of knowledge workers in Korea's ICT service sector is characterized as one of high performance. The degree of mutual respect and trust among workers, information channel system, open and practical discussion, empowerment, information sharing and communication, the degree of clarity of worker responsibilities and rights was comparatively high, while the provision of various education and training programme, readiness to take risks, and intentional job rotation had relatively low scores. Most people were highly experienced in team-based work. And there was good communication among team members. But, the performance-related compensation system was not working properly, so the respondents' level of satisfaction with the fairness of reward system was comparatively low. Among job skills and competencies necessary for doing their jobs, professional technique and competence were recognized as most important.

Characteristics of Skill Formation

Knowledge workers in the ICT service sector, including R&D workers and technical engineers, recognized their college education as very helpful in carrying out their jobs. So it is possible to infer that Korea's ICT education system contribute positively to the formation of knowledge workers' skills. With respect to ICT

knowledge workers in Korea, work and learning were deeply interlinked and self-directed learning provided an important base for skill formation. Learning through experiences played a key role in furthering theoretical knowledge and job skills. Most knowledge workers in the sector thought acquisition of knowledge and information about new technology as highly essential, and were constantly putting in efforts to acquire such information and knowledge. Self motivation was the main impetus for the skill formation and learning of ICT service sector knowledge workers. Private education and training agencies were the main source from which 40.5% of ICT knowledge workers acquire knowledge and skills about new technologies.

According to our research, trade unions in Korea's ICT service sector were somewhat indifferent to the skill formation of workers, and were not active in company policy formulation for their employees. Trade unions offered no active support for the skill formation of employees.

Influence on Organization Performance

In general, organization performance is affected by some of the factors associated with work organization and skill formation system. Our research showed that fair evaluation of individual contribution to company performance was the most important factor to organization performance. Besides, sharing of company vision and managerial strategy, mutual respect and trust among workers, provision of various education and training programme by company, information sharing and smooth communication contribute positively to organization performance.

With respect to skill formation, the performance of organizations was strongly affected by such factors as 'responsible work experience', 'participation in academic and practical seminars', 'OJT', and 'job rotation'.

Discussion and Implications

The following factors are required to build a high performance work organization. First, the company should reflect and share the workers' views on the company's vision, strategy and objectives based on the trust and respect among workers, and it should offer fair compensation and appraisals. Second, employees should have a positive and progressive attitude toward work and a creative and flexible way of thinking, and should become proactive and prepare themselves for the era of globalization by developing, for instance, foreign language ability.

Compared with large companies, small- and medium-sized companies lack the necessary manpower and capital to develop a high performance work organization and ensure knowledge management, thus support needs to be given at the national level.

Considering the differences in the degree of exposure to and the type of education and training depending on company size, the strategy of promoting skill formation should be tailored for different target groups in large businesses and smaller businesses.

The information and communication industry is knowledge intensive and the performance of the companies is directly related with employees' skill formation. This thus demands appropriate allocation and utilization of manpower to build a learning-oriented organization.

On the other hand, there are limits to actively providing in-house education and training is difficult to carry out as small- and medium-sized companies, thus self-oriented learning and external education and training institutes should be encouraged. Especially, various supportive measures should be sought to link self-oriented learning with the performance of the organization.

A Skill Formation Model of High-performance Work Organization

In order to build high-performance work organization and promote skill formation, the employer, the employee and the trade union need to properly perform their role and function, and cooperate closely with each other. The role and function of those interested parties are suggested as follows.

First, the manager should create an open organization culture built on trust to allow workers to actively share and utilize knowledge and information among themselves. He/she should also communicate corporate vision and strategy to employees through learning and education activities, and should strive for an environment conducive to exchange and cooperation between units or divisions. Through such efforts, the manager should foster creative employees capable of efficiently adopting to the rapidly changing international arena, and to this end, the employer needs to support learning, education and training of employees, while ensuring that individual workers are evaluated and compensated in a just manner for their achievements and contribution.

Employees should collect and utilize work-related knowledge and information through collaboration and communication, and put continuous effort into improving their work competencies and skills. This study found that effective means of worker skill formation include on-the-job-training, internship training, study groups and internal job rotations, participation in academic societies and associations, and oversea training.

Trade union should take interest in and support workers' skill formation to help workers stay on with the same company for a long time. For this, it needs to perform its function in voicing and representing employee concerns and interests to the employer, actively support workers' learning, education and training, and contribute to the designing of skill formation policy.

The roles and functions of the interested parties are expected to strengthen through close cooperation, based on which workers' work competencies and skills will improve and. Furthermore, increased workers' job satisfaction, commitment and loyalty will ultimately contribute to the realization of a high-performance work organization with improved sales and profitability.

Development of a Career Guidance Program for College Students in Science and Technology

Eon Lim · Ji-Yeon Lee · Hyoung-Han Yoon

Rapid changes in the world of work and the advent of the aging society require individuals to flexibly cope with, and actively manage, their career over the whole life span. Lifelong career development is essential for improving the competitiveness of a nation as well as enhancing the quality of people's lives.

One of the main tasks of college students is to carefully prepare for the transition from school to work. High youth unemployment rate has further increased the importance of career guidance for college students. Despite the sense of urgency to guide career development during this period, colleges provide insufficient services due to the lack of human and material resources. Therefore, an urgent need has risen for a program which can be used in self-directed way.

The purpose of this study was to develop a program which can facilitate college students to explore and choose their career in self-directed way. In order to make a program geared to user-specific needs, we confined the target user of this program to college students in the field of science and technology. This study is a two-year project. Last year, we assessed the needs for program, selected components of the program, designed its structure, and collected data on majors in the field of science and technology. This year, we developed various contents and up-loaded those contents on the web.

Contents of the Program, 『*CareerVision*』

The name of the program developed through this study is 『*CareerVision*』. 『*CareerVision*』 is a web-based (http://vision.careernet.re.kr) interactive system, where various contents are meaningfully connected.

Three psychological tests were developed in this study: Career Development Readiness test; Science and Technology Majors Fitness Inventory; and Key Abilities Inventory. Career Development Readiness Test was developed to help college students diagnose the relative position in terms of self knowledge, knowledge on major and occupation, confidence in career decision, decision making efficacy, networking, and employability skills. Internal consistency coefficient ranged between .75 and .78. Construct validity was examined using factor analysis and concurrent validity was examined using a test with similar components.

Science and Technology Majors Fitness Inventory is composed of interests on occupations and self-efficacy on courses related to majors. Internal consistency coefficients raged between .78 and .86. Construct validity was examined by the results of factor analysis and the relationship between test scores and degree of satisfaction

on majors. The purpose of developing Key Abilities Inventory was to help students explore occupations covering all majors instead of refining the field of science and engineering. Students can identify the relative position on 9 key abilities (bodily · kinesthetic, spatial · visual, verbal · linguistic, mathematical · logical, musical, creative, interpersonal, intrapersonal, and naturalist abilities). Internal consistency coefficients ranged between .69 and .86. Construct validity was examined based on the results of factor analysis and profile analysis of students with high satisfaction on majors.

Other Contents

『*CareerVision*』 includes information on occupations and majors, advice on career decision-making, career portfolio, and employability skills. These contents are connected to the results of psychological tests.

Information on occupations related to study majors, work places and companies, and the career models of each major was developed in this study; and other information on majors and occupations was provided based on existing information. Career paths of graduates in the field of science and engineering was presented in the form of game.

In addition, career decision making program was made to help students understand the principles of rational career decision making. Career portfolio is a tool to help students plan, organize and document their work samples and skills. It contains a combination of the following areas: values; qualifications; academic plan of study; community service; and networking.

Employability skills includes internship, networking, getting advice, self advertisement, and preparation for work life.

Results of Pilot Implementation

To evaluate the response of end-users and find implications for enhancing functions in program, we implemented the tentative program in three groups. 57 college students participated in the pilot implementation.

Participants evaluated that psychological tests included in 『*CareerVision*』 provided the opportunity to reflect on themselves, and that information on occupation and majors were helpful. Most of students indicated that they would recommend 『*CareerVision*』 to their friends. Results of pilot implementation suggested that 『*CareerVision*』 can be useful in improving career development competences of college students.

Suggestions for Future Development and Utilization

To ensure that 『*CareerVision*』 is used by many students, the following are required: active dissemination of the program; assessment of the effects of the program;

continuous update and upgrade of the program; and development of 『*CareerVision* II』 for college students in the field of social sciences and liberal arts.

The Expertise of Career Consultants for Adult Career Development in Korea: Reality and Expectation

Mi-Sug Jin · Hyoung-Han Yoon

The purpose of this study is to analyze the current situation of career consultants who provide diverse services for adults' career development and to suggest policies to produce and utilize career consultants. While 'career consultant' is not a formalized job-title yet, in this study, we adopt the title to cover various types of workers in this area using diverse titles.

For this purpose, various research methodologies such as literature review, survey, delphi survey through an expert panel composed of 42 members, internet search and interview about systems of advanced countries, etc. were employed.

Career Development Competencies of Korean Adults

In order to draw the expertise required of workers for career development, first of all, we tried to measure the gap between the expected level and the current level in terms of various competences of Korean adults for effective career development. We found as the competences which must be supported for Korean adults; positive attitude toward change, understanding about individuals' current job competence, career transition competence, collecting and utilizing information related to careers, employment skills, etc.

Career Consultants in Korea

We analyzed the current situation of career consultant for adult career development. In analyzing career consultants, we included headhunters, vocational counselor in public employment service(PES) centers, career consultant in private sector, and vocational guidance personnel in private job centers. They were analyzed in terms of job-title, number, and education and training backgrounds.

All together, the number of workers in this field is about eight thousand. The number of vocational guidance personnel in private job centers take up almost two thirds of the entire number. The number of vocational counselor in PES centers is about 1,800. There are about 500~1,000 headhunters in Korea. There are less than 100 career consultants who provide out-placement service and individual career consulting.

Most workers have been focusing mainly on the match between jobs and individuals. They have served specific target groups, such as the highly educated group or the disadvantaged group. There are few consultants who provide individual

counseling and consulting services.

There exists no systemic definition or qualification system about the competence level and expertise of career consultants. Presently, there exists almost no barrier for entering this field. Most workers have been acquiring their expertise once they entered their jobs. Since there has been no systems of formal education and training, it turns out that current consultants are not well equipped in terms of theoretical backgrounds, professional skills and job ethics required for their job performance.

Examples of Expertise of Career Development Support Personnel

By analyzing the examples of countries such as Great Britain, USA, Canada and Japan, where employment patterns have become flexible and the employment support system has been actively working, it is possible to draw the following implications on education and training for career consultants in Korea.

First, while there are various types of workers related to career development support for adults, recently governments have tried to set up a standard for expertise required in terms of contents and levels of competences in order to provide better services for clients. In this effort for standardization, governments have been working based on a strong and broad partnership among the researchers, current workers' association, academic association in this area, etc. The standards of expertise of career development workers have served as a guideline for service activities of current workers and education and training of future workers in this field. Among the standards of the four countries, it was possible to find common elements of expertise of career development support personnels.

Career consultants are defined as persons who help with various aspects of individuals' career development. The delphi panel agreed on the occupational title for these workers- career consultant. The panel also agreed that there is a need to divide career consultants by levels depending on their level of expertise.

Based on the three parts of expertise, we specified knowledge and skills into separate indicators. Depending on the level of skills and knowledge of the each indicator, it is possible to classify the expertise of career consultant into three levels as entry-level, standard, and expert level.

By utilizing this structure of expertise of career consultants, we evaluated the expertise of current career consultants and proposed programs to improve their expertise. In addition, we suggested a programs to train in-house career consultants working in industries.

Strategies for Education and Training and Utilization of Career Consultants

Based on the structures of expertise of career consultants, we suggested the following policies and strategies for training and utilization of career consultants.

- Programs to train educational staffs for career consultants must be developed very urgently in order to provide education and training for current and future

career consultants. For effective training, this program should adopt practical education methodologies such as case studies and role-playing in addition to traditional lecture-type methodologies.

- In order to provide good quality service to adults, a qualification system for career consultants should be developed. The structure of expertise developed in this study may provide the guideline for the qualification system.
- Based on the expertise structure, it is necessary to review current rules and regulations about career development support personnels and to revise regulations to strengthen the expertise of these personnels.

A Study on Management System of Private Qualifications

Myong-Hoon Shin · Sang-Jin Kim

The purpose of this study is to generate and propose effective procedures and methods of creating and managing a series of qualifications, and to evaluate and verify objectively individual learning experiences and working experiences, which have not won a proper recognition in the fields of private qualifications and national qualifications. The study process is as follows.

First, the study reviewed theories of item analysis and item management methods, which is a basis of qualification management.

Second, current status of private qualification management and its category management was analyzed through surveys and interviews.

Thirds, Korean case was analyzed and compared to foreign countries cases and the results gave suggestions. For that, the management of qualification categories in Britain, USA, France, and German were analyzed through literature reviews and on-site surveys.

Forth, a general plan was proposed to improve the management of private qualification categories based on the research for the authentic conditions. The plan was about qualification category development, assessment operation, awarding body management.

Fifth, the study generated the result and the suggestions for activating the private qualification system and building the categories management systems and proposed a policy to realize the above suggestions.

Qualification Category Development

Survey of qualification demands

Industries, end-users or individuals, prospective applicants will be researched on their needs analysis, in order to develope qualification systems sensitive to the market and reflecting various points of views in the decision-making.

Set assessment standards

Assessment standards will be documented as selection standards which is basis of maintaining qualification assessment validity. Assessment bodies need to care for the documentation to verify the validity of the qualification development process as a method to avoid the relative legal problems and the applicants' complaints.

Assessment method

Practicability, defensibility, and cost-efficiency will be considered when selecting

the appropriate assessment methods among a variety of assessment methods such as multiple choice, short subjective test, essay, checklist, interview, simulation, or case study, portfolio, etc.

Set eligibility

In the case of the qualifications related to professionals, application requirements will be set as a kind of prior selection device. It is why the requirements must be impartial and reasonable not to exclude the qualified applicants.

Set and renew available terms of qualification

Renewal dates and procedures will be provided to maintain the effects according to the characteristics of the individual qualifications.

Assessment Operation

Item management

Item management will be regarded not as an item saving method but as a core element to manage category. Based on different codes given for each item, all the information related to item changes will be recorded and managed to catch the item character changes throughout the time series. Item propriety will be monitored consistently by item analysis before the item development and after the problem setting.

Accessibility

Considering the cost effect, accessibility will be assessed not too long to wait for seeing the assessment results.

Testing fee

For assessment, various elements will be considered, including the expected number of applicants, cost for qualification development and operation, and the financial capacity of applicants.

Grievance / appeals procedures

Qualification management body will be able to have appeal bodies to receive and solve any complaints from individual applicants, industries and professionals. In addition, any problems that have not been checked by the qualification management body itself will be handled with the help of outside professional assessment bodies.

Awarding Body Management

Qualification management regulation

Qualification management regulation will be a guide for awarding bodies to achieve the defined objectives and a basis for the assessment committee to function.

Independent governance

From the category development stage, awarding bodies will obtain the independency from interested parties.

Internal assessment

Internal assessment function is emphasized for qualification assessment bodies, which needs regular audit to maintain security, and to prevent injustice taking place in relation to assessment or qualification issuing.

Policy Suggestions

First, it is necessary to encourage qualification market based on fair competitions with private qualification through extension of national qualification management outsourcing. To do this, it is necessary to improve the national qualification competency itself and to ease the private qualification's entrance to the market by adopting organization accreditation system and identifying the qualification management capacity and responsibility.

Second, "qualification management handbook" must be developed and distributed free/credit, which is covering a series of qualification category management methods from marketability survey stage through licentiates' reception management stage because awarding bodies managing private qualifications is at disadvantage in terms of financial and administrative capacity.

Third, prior protection function for awarding bodies should be strengthened by reinforcing private qualification system so as not to produce insolvent qualifications or to discourage private qualification managers from operating them.

Fourth, the problem-setting standards for the base of the qualification test should be changed from subject-essay to job-essay. This is necessary to build a basis of effective assessment of writing and job ability, which would thereby meet the diversity of jobs and the professionalism each job demands.

Fifth, selecting highly requested qualifications is very important because the qualifications affect the supply of human resources in the country. In relation to this, information on qualification categories available in developed countries should be provided to help breed responsible private qualification managers.

IV. Education and Training Program Development

IV. Education and Training Program Development

NGOs and Vocational Education and Training

Euikyoo Lee · Hyewon Ko

Recently the role of non-governmental organizations (NGOs) has grown important in various fields, including education and training, human resources development, and social welfare. Despite several legal improvements and increased public interest, support from the government has been weak and only a few systematical studies have been conducted on the actual condition of NGO-provided education and training. NGOs have provided various social services and thus there is a need to study the actual conditions of NGOs in human resources development for both their employees and members, which can set the groundwork for the realization of a comprehensive learning society and the establishment of social learning network. It is essential for members of society to participate in NGO′s education training programs to achieve a civil society of network learning where citizens play a key role in criticizing freely over public issues and actively taking part in society.

In this regard, this study aims to analyze the actual conditions of NGO′s education and training programs and make suggestions to help improve the performance of NGO′s programs.

In particular, the first aim of this study is to analyze the actual conditions of NGO′s human resources development programs intended for the general public and NGO workers who serve human resources development programs. And the second aim of this study is to make suggestions would increase the probability of realizing a comprehensive learning society. This report surveyed general civic groups providing human resources development programs, except employer and labor groups.

This report sampled 290 groups offering human resources development programs using the 「Directory of Korean NGOs 2003」 which contains about 10,000 groups. Of the groups selected, as many as 116 groups belonged to the civil society sector and 71 groups were in the social service sector. The majority number of NGOs offering human resources development programs were concentrated in the Seoul, Kyunggi and Jeollabukdo areas and in that order. Of those, 140 groups offered such programs.

This report surveyed 290 civic groups from the 「Directory of Korean NGOs 2003」 and 355 affiliated groups of Solidarity network, during from July to August in 2004. The total number of groups surveyed is 77 groups, including 36(46.8%) groups belonging to the civil society sector, 22(28.6%) groups in the social service field, 10(13.0%) groups in the field of labor, farming and fishery, 5(6.5%) groups in the education and academic field, 2(2.6%) environmental protection groups, and 1(1.3%) group for each culture and media, and religion sectors. According to the statistics

in this report, agricultural training programs offered to the public accounted for 29.3%, volunteer training programs accounted for 13.8%, sex education for the youth accounted for 10.0%, children's education programs stood at 5.5%, women education programs constituted 5.3%, and counsellor training programs accounted for 2.8%. The programs funded by the central and local governments included agricultural training(36.8%), volunteer training(36.8%), sex education for young people(11.8%), women education(4.2%), professional career training(3.5%), and leadership education(3.5%).

Most groups surveyed pointed out that insufficient funding is the most serious problem in providing programs. And the majority of groups survey customer satisfaction after the completion of programs and more than 60 percent of the groups surveyed have full-time employers in charge of education. It is expected that more than 73 percent of groups will have human resources education programs.

Under the peculiar political circumstances, Korean NGOs have not fully tried to design programs addressing unemployment issues and economic activities. There are some major issues being confronted and the most important one to resolve is to secure basic components, including humanware, software and hardware, and to establish the networks between institutions.

In terms of humanware, each civil group needs to secure training experts and active learners. As for software, each group must have specialized programs and management. As for hardware, each group should be equipped with educational facilities and have sufficient funds. Moreover there must be a close network system connecting different groups.

In conclusion, for successful management of the training programs provided by NGOs, there must be an institutional system, such as a legislative framework, which does not impair the independency and autonomy of NGOs. Besides, each NGO must secure program managers who can train learners by using materials and human resources, and should create a closely-working network system.

A Study on the Econometric Evaluations for Vocational Training Programmes

Ahan-Kook Kim

Social program evaluation is important and complicated work. To evaluate without bias, we have to gather good data and construct an appropriate evaluation model. This research presents the data and econometric models needed for social program evaluations. First, we analyzed the fundamental problem and the origin of bias in evaluations. Second, we suggested the standard procedure and methods for social program evaluations. Third, we reviewed econometric models with the issues of selection bias or heterogeneity of job-training effects for advanced understanding of econometric models. Finally we reviewed the research papers on evaluation of job-training in Korea, and we examined necessary data for evaluation of job-training and suggested the methods of data utilization.

Main Issues of the Evaluation of Job—training

The effect of vocational training policy is the difference between the performance of vocational training participants and the control groups (the performance of the same group of the people if they did not participate in vocational training).

However, the control group is unobservable, which brings fundamental evaluation problems. The performance of a comparison group is used instead of the control group of training participants. Many assumptions should be set up to use the performance of the comparison group as control group, and a econometric model might be applied.

Using the comparison group's performance instead of that of the control group causes many biases. Such biases are from the differences between a comparison group and the participants group. Unmatching observables bring most of the biases, but there are still biases even if all the observables are matched. Those are selection biases with unobservables. To reduce such biases, econometric models are used.

Standard Procedures and Econometric Methods of Evaluation of Job—training

This research suggests standard procedures and econometric methods of job-training evaluation. The standard procedures of job-training effect evaluation is as follows: a) to concrete the evaluation purpose and contents, b) to review various ways to evaluate training program effects, c) to analyze basic factors and statistical

data for evaluation, d) to compose a comparison group conditioned on matching observables and apply an econometric model.

However, since the comparison group is composed based on observables, selection biases might still remain. To solve this problem, we can use a method called DD which subtracts the difference between pre-training and after-training performance of training participants from the difference of non-training participants. If the pre-training data is not available, training effects can be estimated by an instrumental variable regression with variables which influence training participation but not training performance.

Matching and regression models assume that they have no problem of selection bias with unobservables as long as a comparison group is matched with participants on observables.

To cover up the selection bias problem, Heckman's sample selection model can be used. The procedure of the sample selection model is as follows: a) assuming the participation equation error term of unobservables, b) drawing selection factors from the error terms, c) putting the factors in the regression of an outcome equation to get a result. In another way, IV estimation model does not assume error terms of the participation equation and measures indirectly the effects of participation in training. But instrumental variable must affect only participation, not training performance.

If the data consists of panels, a selection bias problem can be solved by assuming the structure of the error term. Fixed effect model or AR(1) model or covariance stationary errors model are the methods with panel data. To measure the training effects without selection bias, fixed effect model divides unobservables into fixed parts and unfixed ones, and differences out the fixed parts which influence selection and performance. To overcome the problem of selection bias, the AR(1) model assumes that the error term is a first-order autoregression, and the covariance stationary error model measures training effects under the assumption that the covariances of unobservables in the same period are the same.

Random coefficient model, heterogeneity model and LATE(local average treatment effects) reflect the individuality of training effects. Random coefficient model can be applied in the case that the participants are aware of the performance after training but did not intend to participate according to it. Heterogeneity model is used when the participants participate according to the performance after training. LATE measures the individual's marginal training effects when the training policy has been changed.

Korean Evaluations of Job-training Policy: Empirical Research and Data

Most of the research on job-training evaluation in Korea is limited to reemployement training for the unemployed. There is not enough research being conducted in Korea, both in terms of variety and depth.

Lee(2000) conducted research to measure the vocational training effect after composing a comparison group, which is an impressive development in this research

area in Korea. Three studies(Lee and Lee(2003b) is the first), measuring training performance with matching method, are shown up in 2003. Kang and Nho(2000) have measured training performance with sample selection model. Kim(2002), Lee(2003) and Kim et al.(2004) have applied the fixed effect model to measure training effects, controlling the selection bias with panel data.

Reliable data is essential for evaluating job-training policy. Even though good data for vocational training evaluation is not fully established in Korea, we presented available data and models.

There are unemployment insurance DB and network for human resource development(HRD-Net DB) as statistical data about vocational training. The panel data established by two research institutes are used for empirical study of vocational training effects. However, there are many limitations in using the unemployment insurance DB, HRD-net or other panel data. Specifically, institutes of data management rarely welcome the release of resident registration numbers which might cause wrongful disclosure of personal information. To solve this problem, we suggested that institute of data management make temporarily coded individual identifications and researchers use these identification codes for empirical studies.

Conclusion

There should be a feedback system in which there is policy establishment $\rightarrow$ policy evaluation -> policy establishment. Policy execution and evaluation must be carried out together. It will make it possible to gather the data of before and after policy execution and the data for evaluation will be perfectly prepared.

Ultimately an evaluation econometric model is something that complements data in measurement of vocational training effects. However, even the best econometric model cannot complement imperfect data completely. Therefore, gathering reliable data is absolutely the most important procedure, and we need to focus on gathering panel data including information on individual history of labor market experience. We are already 30 or more years behind in the establishment of social experiments compared to developed countries. 2. A Study on the Evaluation Model for Human Resource Development in SMEs

Designing the Prototype for Developing an In-house Blended Education · Training Program and Suggestions for its Application to Work-site Deployment

Jeong Taik Lee · Byung Ro Lim

Corporate training output need to be enhanced. Faced with employment restructuring and flexibility pressures arising from increasing inter-firm competition and swift advancement of technology, corporations are starting to implement blended learning programs to complement and replace their traditional training programs. Today, corporate blended learning strategies have become a critical factor for high skill, high performance-based work system.

Blended learning is a mixture of traditional and online training. There are many types of such mixture.[1] Corporate new hires are target audience of the prototype to be designed by this study. Corporations here refer to Korean ones, especially those with their own in-house training centers where top business drivers for blended learning (Bersin & Associates, 2002) are relevant: deployment speed, scalability to thousands and more, reduced cost per learner, and consistent, measurable, and certifiable content.

In general, the period of one year after employment is critical not only for individual career development, but also for in-service high performance. It is for this reason that this study takes the first year period of employment as the critical period to consider in corporate blended learning programs. The theoretical foundation on which the study is based is an inter-disciplinary approach combining schools of blended learning and that of human resources development.

The prototype this study will develop comprises a procedural frame and a standard one, on the basis of which the actual training manual should be designed. The procedural frame will indicate steps to be taken by program developers while the standard one will cover contents, scope, and level of development. The prototype covers training goals, target audience for training, period, numbers, curricula, methods, feedback, etc. Training delivery methods including labs, simulations, websites, conference calls, and instructor coaching will also be applied. Instructional techniques such as self-study, discussions, stock taking will be introduced as techniques to be combined with the training delivery methods to comprise the main contents of the prototype.

In proceeding with the development of procedural steps and standards, one thing the prototype developers will emphasize again and again is that effective programs include a clear understanding of the learners' job needs in detail. (Bersin&Associates,

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1) The term "blended" means mixing instructor-led training with a wide variety of electronic tools and media. (Bersin & Associates, 2002) The actual decision of what to blend and how to blend varies depending on the business problem and audience being addressed.

2002) Thus the prototype will highlight the importance of company processes surrounding learners' jobs as well as the mission of building contents that fit into this process.

In sum, the study aims to design the prototype of corporate blended learning manual. The prototype consists of two poles; one pole composed of instructional design system (blended self study, blended interaction for testing and coaching, and blended follow up), curriculum development, and strategies while the other one comprises program deployment processes.

The success of designing the prototype is dependent on how strongly corporations are motivated and adopt the principles set by the prototype in the process of designing their own blended programs. Each corporation has its own business strategies, organizational capacities, and investment conditions. Efficient interaction between principled development of the prototype and deployment process of corporate blended program fitting into business challenges will be the focus of this study.

Questions

Questions raised by this study are classified into two areas: First is related with issues of prototype development; the second is related with issues of the developed prototype's application to work-site deployment.

1) Prototype development-related questions

- How is in-house blended education and training program development prototype different from the traditional instructional system design model?
- What characteristics does the target enterprises hold as the end user of the developed prototype?

2) Application-related questions

- What is meant by application of the developed in-house blended prototype to work-site deployment? Does it refer to the prototype's application to individual firm's work-site jobs or application to firm-specific program development?
- Out of the 10 elements emphasized as important in developing an In-House Blended Education and Training Program, what is prioritized as the most critical one?
- How are community-based learning and knowledge sharing linked with organizational level knowledge and learning?

Prototype for Developing an In-house Blended Education and Training Program

The following are important elements that comprise the prototype:

- Analysis of corporate needs and necessity of educational solutions
- Validity test of blended learning
- Analysis of learners
- Content development
- Development of assessment strategies
- Development of blended and systemic linkage
- Building of infrastructure and developing operational strategies
- Pilot test
- Implementation of the program
- Results measurement

Application Guideline to Firm−specific Blended Program Development

The following 10 specific guidelines are suggested:
- Prior orientation need to be implemented with specific reference to the important task of integrating instructional system design, program deployment and delivery, and assessment.
- Work shop to provide trainees with ability to designing action plan
- Further orientation to instruct trainees how to integrate instructional designs with action plans.
- Facilitating enhancement of inter-activities between trainers and trainees.
- Supplement instructional design framework with newly developed action plan.
- Orientation on how to fill-in out performance sheet.
- Guideline introduced to analyze the congruence and gap between the trainer's action plan and trainees' performance sheets.
- Orientation to measure the effectiveness of the prototype's application to firm-specific blended program development.
- Training of how to enhance performance output of the blended program.
- Guideline to examine application of the prototype to firm-specific blended program phase-by-phase.