ABSTRACT

The ideal TVET from the HRD perspectives should assist the acquisition of knowledge and qualities in individuals for their career pursuits, which are the most commonly recognized objectives of lifelong learning. Korean government during economic development era has failed to provide detailed information about the change in future labour demand has caused difficulties for education and training providers to adjust themselves. In its transformation to an advanced, knowledge-based economy, Korea must analyze its education system – not only from the supply side, but also from the demand side. A knowledge-based society is marked by an increase in the economic value of knowledge, a shortened life cycle of knowledge, an explosive increase in knowledge, and the increasing relative importance of knowledge workers. In order to cope with these changes, HRD should be facilitated throughout the course of one's life by means of the systematization of lifelong learning, equalization of opportunities in lifelong learning, localization of lifelong learning, creation of a database for lifelong learning, and networking among lifelong learning systems as facilitated through the Lifelong Education Law. It is clear that Korea’s VET has greatly contributed to economic and social developments in the past, but with the advent of the knowledge based economy and unprecedented global competition, Korea is facing really profound changes and is in need of a paradigmatic shift in vocational education and training.

Key words: vocational education and training system, issues of VET, lifelong vocational education bureau, knowledge society.
INTRODUCTION: LIFELONG LEARNING IN THE KNOWLEDGE-BASED SOCIETY

Lifelong learning is still a difficult subject to deal with despite its acknowledgement worldwide as an important policy issue. Lifelong learning is imbued with a certain utopian element. Until only recently, lifelong learning was regarded more as realizable vision than as a wishful thinking. Especially in the late 1960s when lifelong learning was first advocated, it was something of a pipe dream for the developing countries.

It was an educational ideal espoused by a number of advanced countries rather than an educational formula designed to suit the reality of the developing world. Surely it must have been difficult to broadly apply the term 'Reality' during those years. But today our situation has improved, and we can adopt "Making Lifelong Learning a Reality" as a tangible framework for our own educational aims. These days, even the notion itself has become somewhat in fashion among learned circles.

Unprecedented change has swept the world in the past decades prompting international organizations and European countries to revive the idea of lifelong learning. Societies worldwide are in the process of massive growth, as we evolve further away from our shared agrarian roots into an industrial and knowledge-based society. The economy, too, is being changed from labour-intensive to capital-intensive, and finally on to knowledge and information-intensive. Our very understanding of the nature of work is shifting, as the labour force moves from blue collar occupations, to white and finally on to gold collar. Resources that produce value are also being changed from land to energy to labour, and then again to knowledge. At the same time, the characteristics of war are also being modified in this modern era, turning away from disputes over land to the war for energy, and then on to the war for knowledge. As Peter Drucker said, the standard bearers of society commuted from the gallant knights in the middle ages to the bourgeois class in industrial society, and to the educated knowledge workers in contemporary society.

Korea learned a lot while shifting from an industrial society to a knowledge society. In the process of shifting, however, the economic paradigm still remained that of a labour-intensive, resource-based economy as in the past. Knowledge is the powerhouse of growth. The life cycle of knowledge is growing ever shorter, and therefore knowledge which is useful today may well be redundant tomorrow, while the human life cycle is conversely being extended. The problem here is that school education tends to adhere to the paradigm of the past.

The crisis in foreign exchange reserves that Korea experienced under the IMF regime was not just a crisis in foreign exchange reserves but was one of knowledge reserves as well. The lesson of the IMF crisis is that it is just as important to secure knowledge reserves as foreign exchange reserves in the knowledge society. That is, human and intellectual capital is more important than physical and financial capital. Human Resources Development (HRD) is the most important aspect of lifelong learning, and it should be realized over the course of one's life in a wide variety of fields. Also the development of vocational skills is the main factors of human resources development. Therefore, vocational education and training is the core of lifelong learning and HRD, which are in a mutually affective relationship.
VOCATIONAL EDUCATION AND TRAINING SYSTEM IN KOREA

The ideal vocational education and training should assist the acquisition of knowledge and qualities in individuals for their career pursuits, which is the most commonly recognized objectives of lifelong learning, as well as foster the development of their integrity and social skills as responsible member of the society and workforce.

Vocational education and training are separated in Korea. Vocational education is implemented under the formal education system which is administered by the Ministry of Education and Human Resources Development. Vocational training is carried out as non-formal training which is administered mainly by the Ministry of Labour.

Vocational Education System

Korea uses a school ‘ladder’ following a similar track of 6-3-3-4, providing six years of compulsory primary education, three years of middle school, and three of high school, followed by two or four more years in colleges and universities. High school education aims at providing advanced general and specific education on the basis of middle school education. High schools are classified into academic, vocational and other high schools–foreign language, art & athletic, and science high schools. The higher educational institutions are divided into four categories: 4-year colleges and universities, 2-3 year vocational junior colleges and polytechnic colleges, the Air & Correspondence University, polytechnic universities and other schools (including theological colleges and seminaries). Most higher educational institutions are under the supervision of the Ministry of Education which has control over such matters as student quotas, qualifications of teaching staff, curriculum and degree requirements.

The largest part of Korea’s vocational education and training system is the vocational education at schools. Initial training (pre-employment training) is provided at the senior secondary level (vocational high schools) and post-secondary level junior colleges.

Vocational education aims at providing advanced general education as well as vocational education in the fields of agriculture, technology, commerce, and marine & fisheries. In 2005, there were 728 vocational high schools with a total enrolment of 533,219 which accounted for about 30 percent of total high school enrolment. Most vocational students were taking programs in senior high schools of business/commerce and technology. The required period of study in all national, public, and vocational high schools is three years.

The purpose of junior college education is to produce middle-level technicians equipped with a solid base of theories and skills. Their specialized courses are grouped into technical, agricultural, nursing, fishery, health, commercial and business, home economics, arts and athletics, and so on with two or three year programs depending on the courses. The nursing, clinical pathology, physical cure, radiation, fishing, navigation and engineering programs require three years of education. The communication program is the only one requiring two and a half years of study and the rest require two years of education.
Vocational Training System

However, the formal vocational schools were not able to train sufficient technical manpower for the rapidly industrializing economy. In order to train enough workers to meet the increasing industrial demands, the government enacted the Vocational Training Law in 1967 as a result of which many vocational training institutes were established.

The vocational training programs are classified into ‘initial training’, ‘upgrade training’, and ‘job transfer training’, depending on the curriculum, duration and trainee profiles. However, it does not make clear distinctions between the last two categories. In most cases, further training or in-service training is used to include both. Training methods are classified into three categories: institutional training, on-the-job training and on-line (web-based) training.

The Ministry of Education and Human Resource Development (MOEHRD) is the central government organization responsible for the formulation and implementation of policies related to academic activities, the sciences and public education. MOE integrates and coordinates educational policies, publishes and approves textbooks, provides administrative and financial support for all levels of schools, supervises local educational agencies and national universities, operates the teacher training system and takes charge of the function of non-formal education.

Within MOE, the Lifelong Vocational Education Bureau is responsible for the administration of technical and vocational education at secondary and post-secondary level schools and colleges. The Vocational and Professional Education Policy Division within the Lifelong Vocational Education Bureau is the central government level office dealing with upper-secondary and tertiary technical-vocational education. The Junior College Support Division is looking after the administrative and academic related matters for junior colleges.

Non-formal vocational training is administered by the Ministry of Labour. Headed by the Minister and Vice Minister, the Ministry has two offices and four bureaus: Planning and Management Office and Employment Policy Office, and Labour Policy Bureau, Labour Standard Bureau, Industrial Safety & Health Bureau and Women Workers Bureau. In addition, eight professional officers are responsible for offices of professional concerns.

The Korea Research Institute for Vocational Education and Training (KRIVET) is a national government VET body in Korea. KRIVET has responsibilities for developing and implementing Korea’s national VET research and evaluation effort, together with the collection and reporting of national VET statistics. KRIVET also provides career information services through its affiliated career information centre.

ISSUES OF VET

Mismatch between Demand and Supply

To forecast the changes in demand for vocational education and training has not been easy. Korean government during economic development era has failed to provide detailed information about the change in future labour demand. The deficiency of reliable information for the future demand of vocational education and training made it difficult for education and training providers to adjust themselves.
There is an imbalance between the demand and supply of a skilled workforce in both academic and industrial areas. Higher education began to focus on humanity studies, which increased from 8.4% in 1981 to 29% in 1997. On the other hand, science and engineering studies dropped from 61.5% to 38.1% in the case of vocational junior colleges. In the case of colleges, humanity studies increased from 28.7% in 1981 to 40.6% in 1997 which exceeded the ratio of science and engineering studies. In the case of quota and academic subject control of colleges (including junior vocational colleges) government policy rationality and market failure occurred concurrently where, despite the educational level of students, inevitably underemployment has taken place. In spite of structural unemployment, a labour shortage deepens in some industrial sectors.

Labour market data are not comprehensive enough to identify skills demand. Another weakness is that there is a limitation of linkages in labour market information. For example, data on employment insurance, occupation and qualification are not integrated. Furthermore labour market data are not well utilized in planning education and vocational education. The education market and the labour market are separated.

**Low Participation of Workers**

Due to the low rate of adult workers’ participation in education, which is compounded by the age-restriction to enter higher education institutions, the participation rate of adults in regular higher educational institutions is low. It is only 20.1% among college students aged over 25, which is significantly lower than the U.S. 45.9%. The reasons for low participation rate of SMEs - large firms with more than 1,000 employees were 97.7% whereas those of small and medium enterprises (SMEs) were quite low - are: chronic labour shortages, insufficient capacity to conduct training, and the danger of poaching by other employers.

If a company does not have enough staff or workers to run its production line, it may be very difficult allow employees time off to take part in any kinds of vocational training programs. Also, we need to point out the fact that such low training participation by SMEs is closely related to the so-called low skill equilibrium. That is, there are still many SME employers who respond that one of the main reason of not participating in employer-led training is the unnecessariness of the training itself. Considering the fact that the average skill level of SMEs is lower than that of large companies, such a response from SME employers indicates that they are not taking the so-called high-road strategy - which combines high value-added technology and high skilled workers, - but rather that they are still adhering to the outdated cost-oriented competition strategy which requires only cheap and unskilled workers.

The improvement of equity in training is equally important issue. An increase in human resource investment for those who have limited access to training, such as workers at small businesses, non-standard workers, or the self-employed, may prevent polarization by enhancing their adaptability to changes in the labour market.

Finally, we need to reform the policy making and training delivery process and system in order to enhance the efficiency and effectiveness of training policies. That is, to enhance the
relevancy of training program, we need to realize more active participation of key stakeholders in the process of training policy development and implementation.

**Structural Inertia of VET**

According to Robert Reich, the three jobs of the future include routine production services (performing repetitive tasks); in-person services (providing person-to-person services); and symbolic analytical services (problem-solving, problem-identifying and strategic brokering activities). In Korea, the overarching need is to develop critical-thinking, communication skills, computer skills, quantitative reasoning and social interaction among students so that they can become successful knowledge workers for the future. These new skills are very different from those traditionally taught at schools.

The gap between what currently exists and what is required for the future needs to be bridged for Korea’s successful transition to a knowledge-based economy. For the most vocational high schools it has been difficult for vocational high schools to adapt themselves due to the lack of proper educational facilities and experts within the schools suitable for such advanced technology.

Until now, the main purpose of secondary education in Korea has been to prepare students to enter prestigious colleges and universities. Even though a number of reforms have been instigated in this area, the college entrance examination system still tends to give priority to students who do better in all fields on average, rather than to those who possess creativity and problem-solving capabilities.

Despite of the changing technological and scientific environment, Korea’s vocational education institutions have stuck to their old-style, somewhat outdated education program and courses. There are distortions in the labour market in Korea with respect to wage premiums for different types of education/degrees, partly fuelled by the traditional sense of educational elitism. In its transformation to an advanced, knowledge-based economy, Korea must analyze its education system – not only from the supply side, but also from the demand side.

**Linkage between School and Industry**

The original function of VET is to provide people with opportunities to learn the skills and knowledge required in the labour market, skills and knowledge often not provided by the general education system. For this reason, the nature of linkages between VET institutions and industries is critical in determining the outcome of vocational education and training. The nature of the linkages is affected by various institutional factors (historical background and funding sources).

Few formal linkages between school and industry and enterprises are found. At the national level, no board or council exists for overseeing the development, implementation and evaluation of national training policy. At the provincial level, no industry advisory committees need to discuss training needs in the provinces. At the VTE school level,
employer advisory committees should be organized. Some schools have informal meetings with employers to exchange ideas and information on training. Formal course advisory committee should be developed to advise school on how to develop and implement curriculum. Also, the government should encourage industry to support partnership in active ways. The initiatives of industries and enterprises can strengthen the linkage and should be encouraged.

Rigidity and Linkages of VET System

There is limited continuing education and retraining opportunities for adults. On the other hand, the criteria for selection and the curricula of polytechnic colleges and vocational junior colleges are mainly focused on regular students and it restricts opportunities for industrial workers to attend colleges and universities. We need to restructure each VE institution and build up effective linkages between them, especially between vocational high schools and junior colleges. That is, since traditional programs and courses which are based on narrowly demarcated vocations are no more relevant in a knowledge economy, we need to expand the scope of educational programs at the high school level and link the education at high school and at tertiary level to provide broader basic skills and far-reaching knowledge to vocational students.

Of course, such linkage does not exclude the cases of vocational high school graduates taking jobs just after graduating from vocational high schools. Rather, such a system would provide opportunities of choice to vocational high school students with regard to their further education.

Finally we need to find measures to strengthen the school to work transition. Such measures may include expansion of curriculum-on-demand, more specific courses based on contracts with employers, work experience programs during semesters or vacations and closer cooperation between education institutions and employers at the regional level.

TASKS OF LIFELONG VOCATIONAL EDUCATION AND TRAINING

There are many challenges still to be overcome. A knowledge-based society is marked by an increase in the economic value of knowledge, a shortened life cycle of knowledge, an explosive increase in knowledge, and the increasing relative importance of knowledge workers. In order to cope with these changes, HRD should be facilitated throughout the course of one's life by means of the systematization of lifelong learning, equalization of opportunities in lifelong learning, localization of lifelong learning, creation of a data base for lifelong learning, and networking among lifelong learning systems as facilitated through the Lifelong Education Law. The tasks are summarized as follows.

Balance of Lifelong Employability and Learning

Lifelong employability and active citizenship as the ideals of lifelong learning should be pursued in balance. In Korea, with the arrival of the knowledge-based Society, membership of the OECD, the so-called IMF era and structural unemployment, HRD for improved economic competitiveness as advocated by OECD has been emphasized more than the educational ideals of UNESCO for individual self-realization. In this respect, vocational
education and training should be pursued, with vocational education in the Learning Economy, i.e. education for human capital and social capital formation should be implemented side-by-side.

A similar situation is reflected in the mismatch between majors and jobs. According to the results from the NSO of Korea, more than 40% of respondents with a junior college or university degree said that the course content of their major field of study did not match the requirement of their jobs.

Improvements will be made on the information system about the labour market performance of higher education. For example, more data on key inputs like Pupil/Teacher ratio, unit course expenditure and Outcome measures like persistence/graduation rate, employment rate, reputation of graduates, customer satisfaction and etc.

Enhancement of networking and partnerships will be carried out between universities and other stakeholders like local governments and business community with the expectation that enhanced partnership may contribute to the improvement of relevancy of college education.

Finally reduction of over-expanded higher education sector will be pursued. To this end, Korean government will give extra financial support to induce the M&As among universities and colleges. It is expected that as a result of such effort the number of new students enrolling at universities will decrease by 95,000 by the end of 2009. Currently the number of new students in all universities and colleges is around 630,000. As for the reform of VET, the Korean government has so far issued two reform plans – one for vocational education and one for vocational training.

**Regional Lifelong Learning**

Lifelong learning should be more dynamically pursued at a grass-roots level. Regional lifelong education in Korea has seen little activation thus far owing to a centralized educational system, and such a gap must be rectified as regional communities are the beginning and the end of lifelong learning. As the revamped Ministry of Education and Human Resources Development has been launched, so should innovative models of regional Lifelong Educational Information Centres, Lifelong Learning Hall, and Lifelong Educational Councils be developed and provided. The vocational education and training program should be focused and enlarged in the area of lifelong learning. Management personnel should be professionalized through education and training, and participation of these organizations in municipal affairs should be guaranteed institutionally while taking care not to undermine the expertise and political neutrality of education.

The creation of a new pilot project should be mobilized through the establishment of a Learning City, Learning Region, and 'Support Project to Create Learning Cities and Towns'. This can promote regional lifelong learning and elevate the existing culture of education to the status of the 2nd ‘Saemaeul (New Village) Movement’. Festivals to share and celebrate the results of learning should be held on a regional basis, and regional learning association movements should be activated nation-wide. These measures will transform the nature of
lifelong learning from one provided by the state to a voluntary movement participated in by
the learners. This will be the lifelong learning policy that can promote a learning culture.

Regional HRD systems are also on the way of construction. Since 2003, the Korean
government has been trying to build regional HRD systems on the belief that region-based
education and training delivery system could serve to improve regional innovation through
more region-specific education and training programs. Such systems also require active
participation of industry representatives and the education and training sector at the regional
level.

**Expanding Diverse Opportunities for Higher Education for Adults Learning Organizations**

We need to make workplaces also learning organizations. The boundary between work and
learning is blurring in the knowledge-based society and learning economy; the controlling
authority on education has been shifted from the church (as in the middle ages), to the state in
modern times, and to multinational businesses in the post-modern era. Until the mid-1990s,
the "School to Work" system functioned as a conduit to provide human resources to
businesses. Currently, this system is being transformed to a "Work to Work" model by which
businesses can set up in-house educational institutes and develop programs, so as to better
promote a form of HRD directly related to corporate competitiveness. In order to establish
and run Corporate Universities and transform workplaces into learning organizations of
work, it is necessary to mitigate any excessive educational costs that would otherwise be
borne by the owners of the businesses.

**Improving the Cyber Education System**

We need to increase the participation in Lifelong Learning without the hindrance of time,
space and economy by providing Lifelong Learning information and programs free on the
Internet. Also the programs should be diversified taking advantage of the Comprehensive
Information System of Lifelong Education and Edu-Net. In addition, free cyber-learning
contents for the disadvantaged groups who have less educational opportunities are to be
developed and distributed.

**Reorganizing the Running of Lifelong Learning Institutes**

The results of Lifelong Learning to be equal to the credits of regular colleges should be
acknowledged. Moreover, Lifelong Learning Institutes attached to colleges should be
changed and developed into adult continuing colleges which provide regular courses to
motivate the adult learners, reorganizing Lifelong Learning Institutes into Lifelong Colleges
or Adult Colleges, and consolidating language centers, computer centers, and CEO courses
into parts of Lifelong Learning Colleges.

Various qualifications for the graduates of Cyber/Corporate Colleges should be prepared, and
the standards of awarding or applying various national qualifications should be
supplemented, so that graduates of Cyber colleges get qualifications equal to graduates of
regular colleges. Nonetheless, the establishment standards of Cyber/Corporate Colleges should be strictly applied, so as to prevent excessive establishment.

**Equalization in the Opportunities**

Equalization in the opportunities for lifelong learning is important. It is an ideal of lifelong learning that all members of the state should be provided with equal access and opportunity for learning. Owing to the commercialization of lifelong learning and its concentration in certain urban centers, residents in cities tend to be comparatively overeducated while people in more rural regions remain in a state of absolute illiteracy. As in other countries in Korea, policy to increase opportunities for adult higher education should be supported by policy to improve the basic functions of development of vocational skills. Another important task is to acknowledge the existence of an illiterate population in farming and fishing regions and more impoverished city areas, and encourage the involvement of such citizens in the lifelong learning.

**Support for Disadvantaged Groups to Narrow the Education Gap**

a) **Support for pro-literacy education in order to increase new national basic skills.**

The materials and programs to increase adult literacy and life technology should be supported and provided. Also launching a national pro-literacy movement through the mass media such as TV is needed.

The stipulation of the Lifelong Education Law mentioning that it is the duty of the state to provide literacy education is to be realized. The only accreditation system for elementary school education is the qualification examination for middle school entrance.

There are over 230 organizations including the Civil Education Centre (1), Social Welfare Halls (175), Voluntary Service Groups (19), and Women's organizations (9) provide pro-literacy education.

Actually the aged, who consist of most of the illiterate, are concerned about the examination. The ratio of successful applicants for the middle school entrance exam is higher among those in their 30s to 40s, while lower among those in their 50s. In this context, to expand the opportunity for adults to receive middle school education, free compulsory education of the middle school courses at Lifelong Learning Centers acknowledged by the government should be expanded. Also, the number of Air and Correspondence high schools, while expanding the adult middle school education system by establishing Air and Correspondence middle schools, should be expanded.

The accreditation system for elementary and middle school education for those who take the elementary and middle school courses at those institutes approved by the state should be introduce, regardless of the qualification examination.
b) An education system should be established linking learning, welfare, and employment for the aged.

- Developing and distributing high quality education programs for the aged by establishing 'courses for professional education staff for the aged' for those who are in charge of classes for the aged or for those who are employed at Welfare Halls.
- Developing a vocational education model for the aged in relation to labour markets.
- Providing education program for job transfer, and education program for retirement preparation.
- Providing economical and easy-to-access education for the aged through TV educational programs for the aged.

Reform of VET

For vocational training, the plan for the reform of Vocational Ability Development was issued in April 2005 by the Ministry of Labour and for vocational education Vision 2020: Vocational Education for All in May 2005 by the Presidential Committee of Education Reform.

Both these plans are reflecting the changing requirements and sharing many common points. Key features of these plans are:

First demand driven reform, - it is essential that we make the VET sector more responsive to changes in demand from industry. To this end several measures are included in these plans to systematically incorporate voices from both employers and employees.

Second, co-operation between the VET sector and Industry side should be emphasized. To advance demand driven reform, we need more close cooperation between the VET sector and industry side.

Third, there will be reforms based on the principles of decentralization and networking of VET policy development and its implementation. These principles are based on the recognition that the previous system, in which central government alone decided almost everything regarding education and training policy, is no longer appropriate under the current situation.

Fourth, the Korean government is also trying to encourage the self-directed HRD of individual employees and unemployed people. To this end, the Korean government plans to increase financial assistance to them through a number of channels. For example, employees of small and medium-sized companies and irregular workers like part-time or temporary workers are eligible for the tuition fee reimbursement program which covers part of or full cost of job-related training programs, including language courses.

Along with the growing importance of self-directed education and training, it became inevitable to relax such restrictive conditions and make it possible for more workers to receive job-related education and training on their own initiatives. So the current program
encompasses all SME workers, irregular workers, and large corporation employees who are over 40 years of age.

Fifth, the government is also trying to encourage workers to use paid-leave for education and training to alleviate the time constraints. As for financial constraints, it is considered the introduction of the Individual Training Account system in Korea, benchmarking on the Individual Learning Account of the UK and Individual Training Account of the US. Although the ILA of the UK has revealed some flaws, Koreans are considering such program as an effective measure to address the financial constraints of low-income classes.

Finally, with regard the reform of the VET policy decision making process, we can consider the establishment of a sector oral and regional HRD system. As for the sector oral HRD system, there are 10 sector skill councils (SSC) since 2004. Each Sector Skills Council is a roundtable to discuss the key issues and agenda of each sector’s human resource development and comprises of representatives from major stakeholders including employers, workers and the education and training sector. They were established in an attempt to decentralize the decision making process of national HRD and are expected to contribute to the more demand-oriented education and training system by articulating the voices form industry side and facilitating industry-education cooperation.

CONCLUSION

In conclusion, the future policy directions should take into account the following points. First of all, vocational education must be reborn as lifelong vocational education in the realm of lifelong learning. That is, we need to establish and develop a lifelong vocational education and training system, and make VET sector more responsive to the changing environment. To this end, we need more systematic involvement of various stakeholders within the decision making process. This calls for the change in government role from planner and provider to coordinator and facilitator.

It is clear that Korea’s VET has greatly contributed to economic and social developments in the past, but with the advent of the knowledge based economy and unprecedented global competition, Korea is facing really profound changes and is in need of a paradigmatic shift in vocational education and training.

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