

The Competitiveness Repository South Korea — Meister Schools

Competitiveness is widely accepted as the key driver for sustaining prosperity and raising the well-being of the citizens of a country. Enhancing competitiveness is a long-term process that requires improvements across many areas and long-lasting commitments from relevant stakeholders to mobilize resources, time and effort. Accordingly, to make the right decisions, these stakeholders need information and data.

For more than 30 years, the World Economic Forum has studied and benchmarked competitiveness. From the outset, our goal has been to provide insight and stimulate discussion among all stakeholders on the best strategies, policies and activities to overcome the obstacles to improved competitiveness.

Against this backdrop, the Forum is taking the next step to inform the discussion on competitiveness practices among stakeholders by embarking on a project to build a **Competitiveness Repository** that compiles relevant information about practices that have aimed or are intended to build competitiveness. It will be complemented by a series of private events that provide a safe space for countries to better understand approaches that have worked elsewhere.

The platform will be built around a collection of practices collected through the completion of the template below. With this exercise, we seek to identify practices that:

- Had or are expected to have **system-wide impact**
- Are **scalable and potentially replicable** in other countries
- Have a **strong multistakeholder** component (they should rely on public-private collaboration and could include, for example, programmes and activities led or facilitated by government, but implemented or funded completely or partially by the private sector or civil society such as foundations, trust funds, etc.)

The practices collected will ideally follow the 12-pillar structure of the Global Competitiveness Index (GCI) Framework (www.weforum.org/gci). They will include a variety of factors critical for competitiveness and offer a comprehensive tool to inform stakeholders about the different approaches for enhancing competitiveness in specific areas, as well as the key barriers to their implementation and factors that enabled change.

As well as reflecting the 12-pillar GCI structure, each of the practices will be structured along the following dimensions:

- A) **Background information about the practice**
- B) **Context and need for action**
- C) **Actions/activities adopted**
- D) **Role of the different stakeholders**
- E) **Results, lessons learned and additional information**

A) Background information about the practice

Title of the practice: Meister Schools
Country of practice: South Korea
Status (implemented, ongoing, planned): Ongoing
Public-private collaboration is/was key for success? Yes
A systematic evaluation¹ was undertaken: Yes,
 McKinsey Global Institute
Contact person for this practice: Dong Yeol Park
 KRIVET (Korea Research Institute for Vocational Education and Training), Director, Centre for Vocational Education
Related area of competitiveness: Higher Education & Training

B) Context and need for action

What was the situation/challenge that resulted in a need for this competitiveness practice?

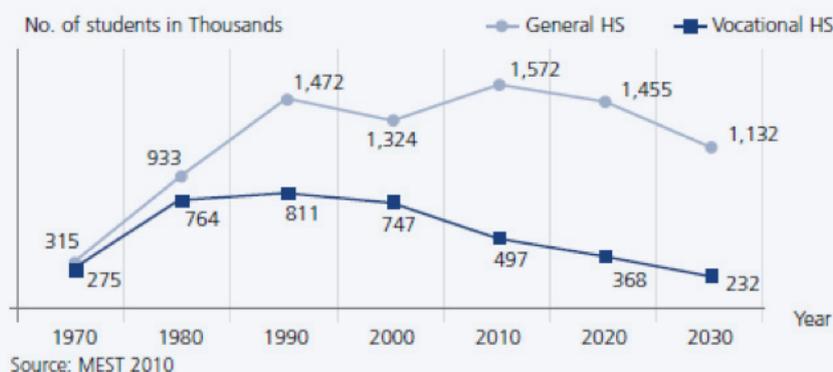
Skills mismatch and skills shortage

Korea faces an overqualified and underskilled labour market. Specifically, 42% of Koreans are overqualified for their jobs. At the same time, 20% of small and medium enterprises (SMEs) report skills shortages.¹ In particular, there is a shortage of technical workers, traditionally supplied by the specialized high schools. This combination of labour shortage and youth unemployment points to the existence of a skills mismatch between supply and demand in the labour market. Government figures indicate that less than half of 2010's university graduates have found full time jobs. "After university, it takes an average of 11 months for Korean students find their first job."² Vocational education is regarded as "distinctly déclassé even though over education has led to a decline in labour utilization."³ "Korean university education's contribution to human capital accumulation is on the decline."⁴ As a result, more emphasis must be placed on improving the quality and attractiveness of alternative forms of specialized and vocational education.

Specialized high schools have for the most part maintained their existing programmes, focusing on training students to be efficient in performing simple tasks that require little skill or knowledge.⁵ As a result, industries view graduates of vocational high schools as low-skilled workers capable of performing only the simplest tasks rather than as skilled workers.⁶ The fact that many of such simple tasks are now performed by low-wage migrant workers from abroad contributes to the phenomenon that the percentage of specialized high school graduates who find employment upon graduation has declined by 57.4% over the past two decades from 76.6% in 1990 to 19.2% in 2010.⁷ In addition, a study recently carried out by Statistics Korea shows that while on average a person's occupation and study major matched in 38.7% of the young adult population, this was the case for only 18.4% of the specialized high school graduates.⁸ These factors, among others, precipitate in the enrolment figures in specialized (vocational) high schools, which continue to decline as more and more students choose academically-oriented general education. Since the beginning of the new millennium, enrolment in specialized high schools has consistently dropped by 1% per year, and accordingly in 10 years the supply of workforce coming out of secondary vocational schools will have been halved compared to the current levels (see Figure 1).⁹

Korea's specialized high schools, which are the main providers of secondary vocational education, significantly contributed to the country's rapid economic development in the past. However, today these schools are facing new challenges to their identity and status as the country's industrial and labour force structures evolve and as demands of parents and students for higher education and elevated status rise. The failure of these schools to adapt to shifting needs of industries and expectations of students have contributed to a skill shortage especially affecting SMEs. In response to these problems, the government, industries, and research and education institutions are working together to establish an innovative, demand-oriented and competence-based system of vocational education. Please see annex for a complete description of the Korean education system

Figure 1: Estimated Student Enrolment in General and Vocational High Schools



¹ A systematic evaluation refers to whether the practice has had a formal evaluation of results or not. This includes evaluations by the implementing institution, academics, NGOs or think tanks.

C) Actions/activities adopted

What were/are the main activities/actions of the competitiveness practice?

Established in 2010, the network of Meister Schools was specifically designed to prepare youths to work in high-skilled manufacturing jobs and other fields. They also seek to encourage a higher sense of status for such positions. Students enjoy free tuition and are referred to as young “Meisters” – the German term for master craftsman.

The first year of Meister Schools focuses on basics (including computer literacy and a foreign language) and exposes the 574 students to a variety of industries, including new media contents, energy, machinery, mechatronics and telecommunications, among many others. In the second and third year, they choose a specialty and spend most of their time in a practice environment. Students are also taught “soft skills” such as global manners and workplace etiquette. They subsequently participate in internships and fieldwork, which can lead to a job offer as early as the end of their first year. They graduate with the equivalent of two years’ work and/or community college experience. The Meister Schools are still new and account for less than 2% of all South Korean high schools.

D) Role of the different stakeholders

Which stakeholders have been involved (public sector, private sector, civil society, etc.) in the competitiveness practice?

Please describe the roles of the different stakeholders. Include how the three groups of stakeholders collaborated.

- **Public sector** funds the schools (tuition room and board)
- **Industry** provides equipment, facilities, scholarships, mentoring/training as well as jobs
- **Schools** have autonomy over curriculum, facility and development of industry links; faculty members also receive industry training (to remain up to date), and each school requires an agreement between the local government, the local school board and companies.

E) Results, lessons learned and additional information

Implementation date of the competitiveness practice (start date, end date/estimated end date)

2010-2015 (ongoing)

What were/are the resource requirements (human and financial resources) of the activity?

It is difficult to estimate the exact number of resources required. However, there are several examples of private contributions since the programme’s inception. SK Hynix, a partner of Chungbuk Semiconductor High School, for example, donated equipment worth 2.8 billion (KRW) for practical training. It also provided long-term, in-house training for teachers and support for classes that teaches tailored curricula.

What were the outcomes/results (expected or achieved) of the competitiveness practice both in terms of quantitative (metrics) and qualitative results?

- 85% placement of first batch/generation (signed employment contracts).
- 28 schools, 11,500 students, 3 applicants per slot (33% acceptance rate); 1,611 companies in 2011 (McKinsey, 2011).
- This number has grown to over 35 in 2013 (The Economist).
- The employment rate of vocational high school graduates increased from 19% in 2010 to 42% in 2012 (OECD).
- Several major banks, such as Kookmin Bank, the Industrial Bank of Korea and Woori Bank, have opened their doors to vocational high school graduates. The Korea Federation of Banks announced that it would recruit more than 2,700 vocational high school graduates over the next three years.
- Sudo Electric Technical High school in Seoul in 2010 has guaranteed all Meister students a job once they graduate, through an agreement with Korea’s electric power authority.

What were the main barriers/challenges to implementing the practice and their effect on implementation? How were these barriers overcome?

Cultural bias: Difficult to convince a critical mass of young people (and their parents) that specialized vocational training is indeed a positive alternative to university. Indeed, 93% of South Korean parents expect their children to go to college (The Economist 2013).

For the policies and initiatives described above to unfold their full potential, changes need to occur in employment culture and the collaboration of private sector institutions with the government policies and programmes. Thus, in order to increase their attractiveness for high school graduates, companies also need to alter their ways of recognizing and utilizing human resources. For example, employers often base their salary and promotion decisions on the employee’s level of educational attainment at the time he or she joined the company, and do not recognize the higher education completed during employment. If such practices can be altered, students of specialized high schools will be more open to taking the employment before education pathway, and employers will find it easier to tap into the pool of talented and skilled workers that these schools have trained.

Cost: Meister schools are expensive as they are heavily subsidized by the government (OECD).¹⁰

Please describe the areas, if any, where the projects fell short of its objectives.

What have been the main enablers and their importance/relevance for the success of the practice implementation?

- The **strong role of the government** has played a major part in the success of Meister high schools. From 2009 to 2011, President Lee Myung-bak visited such schools every year to encourage teachers and students.¹¹
- **Collaboration:** Several relevant ministries are working together by pursuing joint policies. Whereas in the past the education ministry was responsible for talent development in schools while the labour ministry concerned itself with the issues of employment after school, leading to a lack of policy coordination between the two ministries, the latest efforts are pursued more jointly by the relevant ministries under a comprehensive set of education and employment policies. This collaboration based approach is both more

systematic and effective. Similarly, there has been greater collaboration in the private sector, with large corporations, SMEs, Sectoral Councils and trade associations working together. As the industries increasingly engage in actual vocational education programs and other initiatives of school-industry partnership, the government is also working to develop new policies to support such private sector participation.

- **Flexibility:** Meister programme can be a pathway to university, as well as to the workforce.
- Both curricula and methods of teaching and learning need to incorporate a **competency-based approach**. There has been an expansion of political support for these schools and growing efforts to incorporate competencies into their programmes. For example, the National Competency Standard (NCS) is expected to enhance the workplace relevance of education, training and qualifications as well as their linkage with each other. So far, it has been applied in designing customized programs for junior colleges and Meister schools. By 2015, the NCS will also apply to specialized high schools. Efforts are now underway to reorganize the qualification system in such a way as to allow learners to accumulate credits towards a qualification. The NCS is expected to serve as a critical mechanism for reflecting the real demands of employers in the school curriculum and in educational delivery for students. As employers are increasingly interested in students' core competencies, such as problem-solving, communication, relationship management and teamwork, the revision of the national curriculum is being discussed to accommodate the rising needs of employers.

What were the lessons learned from this activity?

For example, what worked, what did not work? What circumstances were not anticipated? What should have been done differently in retrospect, if applicable?

- The importance of having the industry closely involved in curriculum and training so students can acquire the relevant skills in order to enhance their employability.

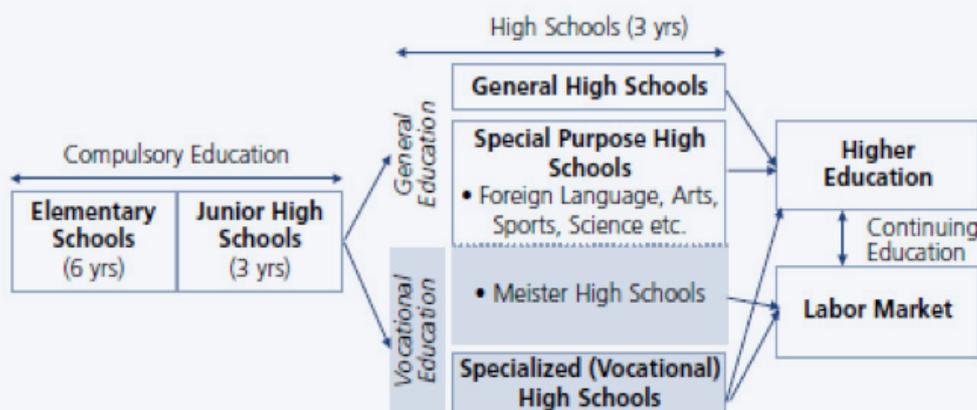
- It is difficult to change the mind-set of people and address cultural biases. For the programme to succeed, it is important to restore a positive perception of vocational schools and to get the support of the parents and students by providing the right incentives (funding model and proven track record).
- The rate of students getting a job after studying in a Meister School illustrates the high quality of training. It could have a positive impact on youth unemployment and skill mismatch going forward.

Annex

The Korean education system is based on a 6-3-3-4 single track system consisting of elementary school (6 years), junior high school (3 years), high school (3 years), university (4 years) and graduate school (KRIVET, 2011). With vocational education beginning at high school level, students choose different school tracks based on their aptitudes and plans for future education and/or career pursuits (see figure 2, below). Thus the Elementary and Secondary Education Act (2011) distinguishes three types of high schools in Korea:

- *General high schools*, providing education on diverse subjects and areas and intended for students who plan to pursue higher education with academic focus.
- *Special purpose high schools* specializing in fields such as natural sciences, foreign languages, arts and physical education, as well as offering programmes customized and directly linked to the needs of industries in so-called “meister high schools”.
- *Specialized (vocational) high schools*, which have traditionally been the principal providers of vocational education at the secondary level in Korea. Offering programmes which differ depending on the target industry, these high schools give students the choice of either seeking employment upon graduation, or of continuing their education on the tertiary level.

Figure 2: Korean Education and Training System



End Notes

- 1 SMBA, 2008
- 2 The Economist, 2013
- 3 BWP, 2011
- 4 McKinsey
- 5 KRIVET
- 6 PARK et al. 2010
- 7 MEST 2011
- 8 Statistics Korea 2010
- 9 MEST 2010
- 10 Jones, 2013
- 11 Korea Herald Editorial, 2013

References

- BWP, 2011. Korean Policies on Secondary Vocational Education. Available at: <http://www.bibb.de/veroeffentlichungen/en/publication/download/id/6663>
- D-Y Park et al. 2010. Demands for Vocational High School Graduates and Ways to Strengthen Vocational Education. KRIVET 2010
- Jones, R. S. (2013), "Education Reform in Korea", OECD Economics Department Working Papers, No. 1067, OECD Publishing. Available at <http://dx.doi.org/10.1787/5k43nxs1t9vh-en>
- KRVET, available at: http://eng.krivet.re.kr/eu/ec/prg_euCDADs.jsp
- Korean Statistical Information Service (KOSIS). Statistics Korea 2010-1 Available at: www.kosis.kr/eng/
- KRIVET: Meister High School Promotion Project. MEST 2010
- KRIVET: NCS Development Promotion Project. MEST 2009
- Korea Herald Editorial, 2013. Available at: <http://www.koreaherald.com/view.php?ud=20131226000507&mod=skb>
- McKinsey on Society, Tackling Youth Unemployment, Meister High Schools. Available at: http://mckinseysociety.com/e2e_casestudy/meister-high-schools-south-korea/2/#sthash.5ptk4IPr.dpuf and http://www.mckinsey.com/insights/asia-pacific/beyond_korean_style
- Ministry for Education, Science and Technology (MEST): Educational Statistics. 2010
- Ministry for Education, Science and Technology (MEST): Educational Statistics. 2011
- Small and Medium Business Administration (SMBA): SME Workforce Survey. 2008
- The Economist. 2013. "The other arms race. South Korea's education fever needs cooling". Available at: <http://www.economist.com/news/special-report/21588204-south-koreas-education-fever-needs-cooling-other-arms-race>