Journal Plus Education, ISSN: 1842-077X, E-ISSN (online) 2068 – 1151 Vol X (2014), No. 1, p. 275-291

EDUCATION POLICIES UNDERLYING SOUTH KOREA'S ECONOMIC SUCCESS

Faruk LEVENT,
Marmara University Atatürk Education Faculty,
faruk.levent@marmara.edu.tr
Zeynep GÖKKAYA
Marmara University,
Distance Education Application and Research Center,
zeynep.gokkaya@marmara.edu.tr

Abstract: *Countries' education level is the most important driving force for economic development. Scientific researchs demonstrate that there is significant relationship between education level and development elements which are economic growth, political and social developments. South Korea was on the border of starvation after the second world war although today it is among the world's most advanced economies. It is known that education policy and stable policies in this field have important role South Korea's phenomenal success in area of development. The purpose of this study, is to examine South Korea's educational policies underlying economic success. In this respect, the findings obtained from the literature are evaluated and fundamental constituents of education in South Korea are described in eight different titles. The eight fundamental constituents are as follows: (1) higher allocation of general budget for education, (2) importance of teacher training, (3) quality approach in higher education, (4) large targets in field of science and technology, (5) importance of English training, (6) using effectine information technologies in education, (7) gifted education, (8) high teacher salaries.*

Keywords: *South Korea, education system, educational policy, educational planning.*

1. Introduction

It is a well-known fact that education serves as an engine by means of labor, research and innovation (Green & Ferguson, 2011). Successful countries in education has developed economies due to their capacity to adapt according to the needs of the age. Researches show that there is a significant relationship between economic indicators and PISA exam results. This view supported with the data elicited from the most successful five countries in PISA (Finland, Korea, the Netherlands, Japan and Canada) which have higher national income of per capita (Aydın, Sarıer & Uysal, 2012).

South Korea which attracts attention with its outstanding performance in the PISA exam has transformed from a country that relies on agricultural production to one of the largest 15 economies of the world in short time which doesn't exceed a human

lifespan. On the other hand, South Korea had a major bottleneck in economic terms and asked for external food aid after Civil War II. According to The International Monetary Fund's findings, it increased national income of per capital $88 to $31.949 from 1965 to 2012 (IMF, 2013).

South Korea has managed to capture 10% growth rate in 1999 despite having experienced the Great Asian crisis in 1997. In 1970's South Korean companies began to export ships, steel, electronic home appliances and entering tender of international grand projects but in the middle of 1960s their products merely met minimal workforce based simple manufacturing standards such us textiles, garments and toys. For the period starting from 1980s to 1990s semi-conductor memory cards, computers, automobiles, mobile phones, LCD and plasma televisions as well as products that require advanced technology has become the major export products (Yoo & Winsor, 2009).

South Korea is one of the leading countries in the world about Information and Communication Technology (ICT) that has managed to adapt in education. With the advances achieved in distance education offers consulting services to other countries. About fifty years ago, only 5% of high school graduates can take higher education in South Korea but this rate is increased over 90% today. To provide rapid development, there are important support of private sector beside government in the area of education (Kutanis & Tunç, 2010). Especially R&D activities are supported and this has contributed development of country's technological infrastructure thanks to integrated private sector to education.

When Korea's economic success is evaluated, its developed economy has evolved in parallel with its improments in education. In this country, the educational system is shaped according to the needs of the market. In other words, South Korea has shown a rapid development in line with its educational plan which is created based on industry's needs and expectations while maintaining a supply-demand balance (Peuch, 2011). The main factors underlying all this progress involve fitting education policies and strategies, appropriate planning, implementation and evaluations.

The purpose of this study is examine educational policies underlying South Korea's success which belonged to the category of developing countries almost 30 years ago. Nowadays, though, it finds a place amongst the economically developed countries.

2. Education system from past to present in South Korea

South Korea's Ministry of Education is responsible for all kinds of education since 1948. It is seems that the name of Ministry is changed many times when considering the historical background. In 2001, its name has turned into "Ministry of Education and Human Resources Development (MOEHRD)". It is called "Ministry of Education, Science and Technology (MEST)" after through merger "Ministry of Education and Human Resources Development" and "Ministry of Science and Technology" on 29 February 2008 (NUFFIC, 2013). It is separated from "Ministry of Science and Technology" and operates under the name "Ministry of Education"(MOE) until 23 March 2013.

Ministry of Education represents a faction of the government that is responsible for the creation and application of the policies regarding science and education. The new ministry aims to train self-confident Korean citizens who contribute to the welfare of the society while promoting democratic developments for the country and the human race in line with the "Hognik Ingan" ideology. the Ministry plans and coordinates educational policies, formulates policies that govern the primary, secondary and higher educational institutes, publishes and approves text-books, provides administrative and financial support for all levels of the school system, supports local education offices and national universities, operates the teacher training system and is responsible for overseeing lifelong education and developing human resource policies (MOE, 2014a).

The school system in South Korea consists of six years of primary or elementary school, three years of middle school, three years of high school, and two years of junior college or four years of college or university. In Korea, children must attend classes from primary school to middle school (Kim, 2005). Primary school starting age is seven and all primary schools are free except of some private schools. Three type education are given by high schools such as general, vocational and other (foreign language, fine arts etc.). Higher education institutions provides seven different types service which are chosen by students (Bakioğlu & Baltacı, 2013).

According to UNESCO, Korea's education system can be explained with four words: Democratization, autonomy, localization and globalization (Peuch, 2011). Other prominent features of South Korean education system are listed in the below (Lee, 2008):

- Education rapid expansion in all levels of schooling
- Efficiency in policy implementation
- High equity in education
- Zeal for education
- Education extreme competition for college entrance
- Over-centralized educational administration
- Lack of diversity
- Debate between excellence and equity
- Low confidence in school education
- High private expenditure for tutoring

Korean education system is renewed constantly in accordance with the terms of era. In this respect, updates are dynamic with obtain of targeted acquisitions besides training models and standards.

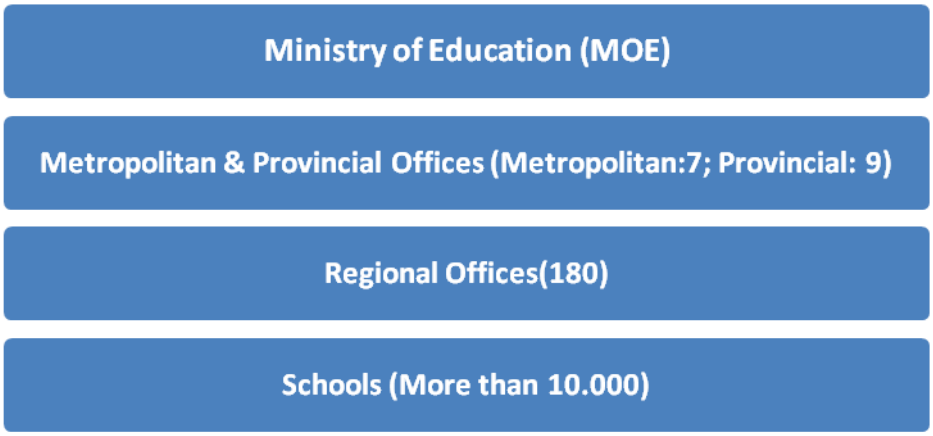

Figure 1. Structure of Education Management System, developed by Lee (2008)

South Korea's structure of education management system is shown at Shape 1. Although it may seems like there is a horizontal hierarchy structure with a South Korean education system has an important role in the local governments.

In 1980s, informal education began to take shape with qualitative changes such as adoption of lifelong learning concept and restructuring education system according to these changes. In the 1990s, local autonomy has become an important ingredient in education policy agenda. The main objective is to support vocational training within the scope of lifelong learning. Thus, the number of qualified people and trained new generation would be increased across the country (NUFFIC, 2011).

The national curriculum sets strict regulations for the number of school days, the subjects to be taught for each school year, and the time allocation for each subject in each school year in South Korea.

The national curriculum provides criteria for the development of textbooks and general guidelines for teaching-learning activities and methods of assessment. However, some changes are made by local education authorities and some school units (Lee, 2008).

The national curriculum is updated periodically to meet emerging needs of new educational demands and to include new academic disciplines to the program (MOE, 2014b). In this context, it has been changed seven times 1954 until today. The most recent curriculum change is started to apply at primary education in 2000 and has spread to all school systems until 2004. New curricula gives the opportunity to move away from traditional rote learning, thanks to provide more flexibility to meet student's individual needs and to increase independent learning activities (Bakioğlu & Baltacı, 2013).

Before appling the new national curriculum, referred to as the 7th national curriculum, the goverment pushed public schools to change curriculum and teaching methods, which was referred to as "open education", especially for elementary schools. One of key features 7th curriculum is that having selectable program of curricula. Additionally one of the major aim of the 7th curriculum was to reduce the size of existing bational curriculum bu 30% and to give autonomy to school of teacher based curricula (Kim, 2004).

Unlike in the past, Seventh Curriculum is student-centered curriculum which emphasized student-focused, individual abilities, aptitudes and creativity. This curriculum should have a trained person's characteristics are defined as follows (MOE, 2014b):

- A person seeking individuality on the basis of development of the whole personality
- A person who shows a certain capacity for basic creativity skills
- A person who led a career pioneer in wide range of cultures
- A person that add new value as well as understanding national culture
- A person who contributed to the development of society based on democratic civil consciousness

While "open education" and "performance assessment" focused on the "learning process", the 7th curriculum, which began to be applied to schools in 200, centered "achievement level". "Open education" policy begins with performance evoluation at the office of local education assessment, in 1996 and its place of learning process is emphasized for implementation all schools. The fundemental idea in the implementation of this policy aims to continued establishment of the school community, student-centered curriculum and evaluation procedures of a variety of student at school and outside of school. Also open education intended to reach the maximum number of students. University entrance examination has to be improved for performance evaluation and it is hightlighted that the comparatively system would be better instead of note. These improvements followed policy plans such as evaluation student success at elementary and secondary education and improvement school control systems (Kim, 2004).

3. The State of South Korea in International Student Assessment Exam

Success of countries and education adequecy are evaluted with different exams all over the world. PISA (Program for International Student Assessment) is one of the efficient and comprehensive exam, which is prepared to determine student's situation, who complated compulsary education students, 15 years old in OECD. PISA compares efficiency student's knowledge in view of today's information society. Structure of PISA determines student success multi dimensionally about mathematics, science and reading. The evaluation was made about problem solving at 2003 but this is not continued.

PISA is managed by cooperation Education Department of OECD and countries' ministry of education. Each country has its own exam committee. Students attending exam are selected randomly using a software named Keyquest. In 2012, totally 65 countries - 34 member and 31 non-member countries of OECD- participated the exam. 28 million students were represented by 510 thousand students. Countries made education planning and identified new policy and strategy with using success of PISA which is made period of three years.

Table 1

South Korea's Success of PISA

	2000		2003		2006		2009		2012	
	Score	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**
Reading	525	7	534	4	556	1	539	2	536	5
Mathematic	547	3	542	3	547	3	546	4	554	5

Science	552	1	538	2	522	11	538	6	538	7
Problem solving	-	-	550	1	-	-	-	-	-	-

Source: "PISA 2012 Results in Focus", adapted from OECD (2014)

South Korea's annual PISA results are given at Table 1. According to the table, It is possible to see South Korea has first place about science in 2000, problem solving in 2003, reading in 2006. Besides, South Korea has left behind lots of developed countries with taking higher points in four different areas of OECD average between 2000 and 2012. When South Korea's PISA results is evaluated, it is possible to say that South Korea has a prosperous graph.

There is a strong relationship between South Korea's PISA results, education policy and examination system. For example, South Korea's examination system gives more importance to reading rather than science which leads to a progress in students' reading acquisition. In addition, according to Lee (2008) South Korea's area of reading success is depend on factor listed below:

- The new national curriculum put more emphasis on critical and creative thinking skills through reading and writing.
- Reading assessment more focused on thinking ability.
- The university entrance system changed. Essay test that assesses both writing skills and logical thinking abilities introduced.

Educating children from elite universities in Seoul is a family prestige at South Korea. The old entrance examination system that relied entirely upon a highly objective evaluation greatly emphasizing memorization and rote learning brought students "examination hell" and imposed heavy burdens on parents who lavished their money on private educational expenditures for their children. This old system has amended several times cause of hightlighting rote learning and mechanic test solving skills. It has fundementally changed with part of education reform which began in 1995. The new system brings out student's personal school file records, article writing and interview skills with general knowledge and aptitude test. It aims to make meaningful contribution for high school students development of a versatile which means return to the main task (Lee, 2000).

TIMMS (Trends in International Mathematics and Science Study) is a mathematic and science tendency screening research which is prepared by IEA (International Association for the Evaluation of Educational Achievement) in Netherland. Aim of TIMSS' preparation is making more understandable function of education system for curriculum specialists, researchers and managers who can effect education policy. It determines students knowledge and skills multi-dimentionally. TIMSS, which is made per four annual period, is prepared to evaluate student's mathematics and science success with using a standard scope. Besides, it is designed to determine how realized mathematics and science learning and teaching in school and to measure and evaluate differences between national education systems all around the world (Yücel, Karadağ & Turan, 2013).

Table 2
South Korea's Success of TIMMS at 8th Grade

	1995		1999		2003		2007		2011	
	Score	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**
Mathematic	607	2	587	2	589	2	597	2	613	1
Science	565	4	549	5	558	3	553	4	560	3

Source: "International Database", adapted from TIMMS (2013)

South Korea's annual TIMMS results are given at Table 2. According to the table, South Korea took place in first five and left behind many OECD countries between 1995 and 2011. Intercalarily, 42 countries participated TIMMS exam in 2011. 8. grade students of South Korea has settled first position field of mathematic and third position field of science.

There is significant impact of the reform movement in the field of education under South Korea's achievements at TIMSS. For instance, in the context of the curriculum, the number of required courses have been reduced, elective courses have been increased. In addition, it provides tend to be composed of creative education, which became experimental activities such as presentation, discussion and experiments instead of exam-oriented rote learning. In other words, the new curriculum, which encourages for problem solving and creativity, gives the possibility to use more power and initiative to local authorities and schools (Bakioğlu & Baltacı, 2013).

4. Success Factors of South Korea in Education

a) Higher allocation of general budget for education

The South Korean government invests heavily in education. Education expenditure was 2,5% of total budget in 1951 but it is raised to 17% in 1966 (Porter, 1998). This constant increase has continued since the mid-1980s between 2000-2008 and approximately 15% of total public expenditure is shared.

Table 3
Education spending ratio of total public expenditure in some countries

Country	**2000**	**2005**	**2006**	**2007**	**2008**
Norway	14	16,7	16,2	16,5	16,1
Swiss	15,6	16,2	16,3	16,1	16,7
South Korea	**-**	**15,3**	**15,2**	**14,8**	**15,8**
Denmark	15,4	15,7	15,4	15,4	15
U.S.	14.4	13,7	14,7	14,1	13,8
Israel	13,8	-	13,3	13	13,7
Australia	13,8	14,1	13,8	13,7	12,9
Belgium	12	11,4	12,3	12,4	12,9
Finland	12,2	12,6	12,6	12,5	12,4
Russia	-	-	-	-	11,9
Netherlands	11,2	12,2	12	11,7	11,9
Spain	10,9	11	11,1	11,1	11,2
Austria	11	10,9	11	11,1	11,2
England	11	11,8	11,9	11,7	11,1

France	11	10,6	10,6	10,7	10,6
Germany	10,1	-	9,7	10,3	10,4
Turkey	10,4	9,5	9,4	10,4	10,3

Source: "Public Spending on Education", adapted from Worldbank (2012)

The proportion of total public expenditure on education budget is given at Table 2 for between 2000-2008. As seen in this table, according to 2008 data South Korea is the third country which has the largest share of education in the public budget after Norway and Switzerland. Additionally, it is said to possible that South Korea's rate of shared budget on education is bigger than most of OECD countries.

In parallel with the investment in education, South Korea located the highest literacy rates in the world among countries. Besides, it seems that high school and college graduates has majority. According to official data of South Korean Statistical Institute (KOSIS), employment-labor ratio is given at Table 4. Table shows that economically active population number is 25.873 million until 2013.

Table 4

Employment-Labor Ratio (2013)

By Education Level	Pop. 15 years old and over Thousand person	Economically active pop. Thousand person	Not economically active pop. Thousand person	Participation rate Percent
Primary school graducates & under	6.227	2.444	3.783	39,2
Middle school graducates	5.790	2.333	3.457	40,3
High school graducates	16.087	10.183	5.904	63,3
University graducates & over	13.992	10.914	3.078	78
Total	42.096	25.873	16.223	61,5

Source: "Economically Active Population Survey", adapted from KOSIS (2014)

b) Importance of teacher training

The idea of education quality can not exceed the quality teachers' is adopted by Ministry of Education. Therefore, contribution to the professional development of teachers was placed great importance in South Korea (Kim, 2005). This qualitative rise is linked with research which are made to ensure that teachers used technology effectively in education. In parallel, "flipped classroom" is adopted by a large portion of teachers in South Korea.

Reforms of teacher training were initiated in South Korea. Graduated from standard schools was enough for being teacher between 1945 to 1961. In that period, a demand of more teachers was expected with increased students. This lack was

remedied by hiring graduates of standard and high schools, who completed 18 weeks education period at education centers. All the regular schools were converted to two-year vocational college of teachers in 1961 (Bakioğlu ve Baltacı, 2013). After 1984, it was stipulated that completing a four-year undergraduate education was required for being teacher. Today, most of teachers are trained by 11 universities, which are affliated with the Korean National University, such as Department of Primary Education at the Korea National University of Education and Ewha Womans University *(MOE, 2014b).*

Teachers are under no obligation after graduating to finish their master's or doctoral programs. Teaching certificate exam is not required to be teacher. However, it is necessary to take teacher placement test to be able to teach in state institutions. The first phase which covered %30 of the exam, is designed to measure general education courses. The second phase includes open-ended questions and interviews about field and professional knowledge. The teaching profession is preferred by students in South Korea, cause of respected by family, having lifelong validity of teaching certificate after received, exemption from compulsory military service *and* a guaranteed retirement age of 65 *(Kwon, 2004; Kim, 2005; Kim, 2007).*

c) Quality approach in higher education

Korean Ministry of Education has launched a program called "Brain Korea 21" which successfully trains scientist in higher education in 1999. The main purpose of this program is to create world-class research universities which supports a platform for the production of original ideas and creative technologies to fulfill its mission. A large increase in the number of international publications of universities and faculty exchange mobility is provided thanks to this program. In continuation of the same program, a decision was taken in 2005, within two years the number of national universities to be reduced from 50 to 35 and is intended to reduce the quota of students of these universities. In this context, it is decided that the number of private universities is reduced %25 and its number decreased to 271 from 358. Universities participate in the program is planned restructuring or merging with this method (International Qualifications Assessment Service, 2009, as cited in Bakioğlu & Baltacı, 2013). Drastic changes gives positive results in a short time which is made regarding the provision of qualitative development in higher education, have increased the international competitiveness of universities in Korea. According to this report, South Korea's three universities are in the top 100.

QS World University Rankings in the United Kingdom which ranks 29 different field of science reflects the results of an extensive research. This study took place as a result of the meetings with 46,000 academics and 25,000 graduate and it has provided important information for the comparison of the performance of universities. Besides, the fact that Korea Advanced Institute of Science and Technology is recognized as the institution with the highest progress amongst the top 100 universities is a prominent development (QS, 2013).

d) Large targets in field of science and technology

South Korea has managed to become a country of interest with stunning development thanks to the success of economic development, innovation and R & D activities in the world. South Korea took place under the OECD avarage with GDP per

capita and expenditure on R & D activities untill 1980s. South Korea reversed this trend completely thanks to a remarkable growth has made a major breakthrough in technological terms (Arslanhan & Kurtsal, 2010).

After 1985, South Korea has accomodated selective international brands from all over the world in field of automotive, electronic and telecommunication. In particular, the brands in the electronics industry has become a competitor to large companies all over the world with their innovation efforts and amount of exports. South Korea make an investment in area of science and technology to produce this increasing. For instance, South Korea has reserved the share of budget which is $50 billion between 1994 to 2015 because it aims to become in top five about telecommunication network (Selwyn ve Brown, 2000).

World Intellectual Property Organization (WIPO) published a list which includes top ten countries in patent application in 2012. Table 5 shows that South Korea is ranked fourth in the world with its high number of patent applications in 2010 (WIPO, 2012). When the patent number per million capita is considered, it is possible to say that, South Korea has better position than USA, China and Japan.

Table 5

Top 10 Countries in Patent Application Number (2010)

Id	Country	Patent Application Number
1	U.S.	490,226
2	China	391,177
3	Japan	344,598
4	**South Korea**	**170,101**
5	Germany	592,45
6	Russia	42,500
7	Canada	35,449
8	India	34,287
9	Australia	24,887
10	Brazil	22,686

Source: "IP Facts and Figures", adapted from WIPO (2012)

There are two significant role which is provided high patent application number in South Korea. One of these is a developing R&G system and the another one is an education investment (Arslanhan & Kurtsal, 2010).

e) Importance of English Training

South Korea places great emphasis on English education. Studies that involve English curriculum and practice have started in this field in order to aid pilot implementations which have began from early-mid-high schools in 2008 (Selwyn ve Brown, 2000). Importing teachers whose main language is English, is one of the effective method in English training. South Korea has employed assistant to come their country in secondary schools thanks to providing coordination with American universities. For example, Wisconsin University in the United States is in communication with the education directorate of the most populous Korea's province

which is called Gyeonggi. Highly qualified students at the Wisconsin University can request to become teacher with this in Gyeonggi (Koru & Åkesson, 2011).

Korean President recognizes the value of training in English for economic development in 2008. Then, a radical plan which envisages all courses taught in English in schools until 2010, was announced. However, the suggestion could not be applied cause of intense reaction of educators' and parents'. Instead, the Ministry of Education has decided to be cultivated and certified English teachers via new English Education Program (TEE). In this context, thousands of teachers have been subjected an intensive program of six months. TEE has created a stimulating effect for participant teachers to use English in the classroom and to plan more student-centered activities (EF, 2013). Especially concurrently with the importance given to learning English, reading development planned and this situation has a positive impact on PISA results.

Korean students begin to learn English language from grade 3 in primary schools (Kim, 2005). Starting from importance of English education should be given at an early age, English training is planned to start of primary schools's first grade instead of the third grade. Besides, it is aimed to give "native speaker (the language spoken as mother tongues-speaking)" to each secondary school. In this context, teachers who has knowledge of English, has priority when they are selected (Choi, 2006).

f) Using effective information technologies in education

27.5 students are present in each primary level classroom in South Korea. The average class size is 21,2 at the primary level in OECD countries. The avarege of lower secondary education level class size is 23,4 in OECD countries though this ratio is 34,7 in South Korea (OECD, 2010). Using technology effectively in education explains success of international exam despite of crowd classes.

The information technology background and web opportunities of South Korea is designed globally. For instance, the average computer number for each student is 5,8 and %70,7 of schools have internet 2Mbps internet connection. Majority of Korea public can access internet anytime and anywhere (UNESCO, 2010). Negative effects of crowded classrooms decreases thanks to this method.

There is an autonomous examination system in Korea to evaluate the education system. This exam is known CBAS and unlike PISA it uses videos consistent with simulation and conceptual frame in real life. Students' information and communication technology ability is measured using this method (Lee, 2008).

South Korea provides consulting services to developing countries about using information and communication technologies in education, planning and related to the execution of various projects. In this context, totally 11 countries are provided consultancy services between 2006-2009 (UNESCO, 2010). All these findings shows that there is an important role of information and communication technologies on South Korea's education system. This integrated relationship provide positive effect on development of South Korea. There is a parallel relationship between slope of Korea's PISA scores and spreading of distance education in years.

Korean Ministry of Education has introduced legislation in the field of Science and Technology (MEST) to established cyber universities in 2001. All cyber universities are establised to support KNOU (Korea National Open University) which

founded 1972. 18 cyber colleges and universities has been provide undergraduate and graduate education in various science fields since 2010. Besides, KNOU educate totally 30.000 of 170.000 students in cyber universities (Jung ve diğerleri, 2011). The demand of distance education has been increased at higher education with developing cyber universities concept.

The success of South Korea's policy on e-learning and information and communication technologies is provided thanks to mechanism of covered system, secured support and budget, successfull partnerships between public and private sector, appropriate skill development, effective monitoring, evaluating system and rules that are defined in legal framework. The effective instrumental in the success can be summarized as below (UNESCO, 2010):

- Systematic policy implementation;
- Capacity of implementing organizations;
- Implementing policy through liaison and cooperation between organizations;
- Sustainable financing of ICT in education;
- Well-established policy monitoring and evaluation systems;
- Consumer-centred policy implementation;
- Shift in policy to respond to technological and societal change.

g) Gifted education

Having qualified manpower is the most important factor for the development of the country. Qualified manpower is closely associated with number of outstanding talents. In other words, country's development is not possible in the real sense without giving importance to the education of gifted. Besides, superior brain power is revealed through education in all areas. Therefore, this restricted human resource is an extremely important economic factor (Erkal, 1992, as cited in Levent, 2011). South Korea has been remarkable with significant strides in the field of gifted education. South Korea which is leading revision on gifted education, has made the largest investment in the training of teachers. In this context, teachers who are involved in gifted education, has been trained with in-service training between 1990 and 1994 thanks to collaboration of Korean Educational Development Institude (KEDI) and United Nations Development Program (UNAP).

In 1995, the goverment has given permission to students for skipping a grade with a new education law. This policy has been implemented since 1996 and gifted students can begin elementary schools at an early age with outstanding academic achievement. All of the schools have authority to decide to step up with a careful evaluation by reaching an agreement with parents (Lee, Cho & Lee, 2006). Additionally, regular schools provide gifted students with enrichment programs. After schools, enrichment programs are offered in various fields such as science, mathematics, music, dance, foreign languages and arts (Cho & Kim, 2003).

The Gifted Students Education Promotion Act was established in 2000. The Revision of the Gifted and Promotion Act has been issued in the same year. It supports economically disadvantaged gifted student programs to meet special educational needs (Jeong, Seo, Kim & Kang, 2006). Thus, more than 1800 students participated the program which has been initiated to identify and educate gifted students lack socio

economic rights. These students are selected for the program on the basis of critical thinking tests instead of standardized tests.

Table 6

Quantitative Data of Gifted Education in South Korea

Institution Type	**Quantitiy**	**Total Student Number**
Gifted School	4	1147
Science High School	17	4320
Gifted Towards Custom Classes	3521	64.283
Towards Gifted Centers (Provincial Education Office Optional)	357	34.447
Towards Gifted Centers (at the university)	61	8644
Total	3960	112.865

Source: "Suggestions for Gifted Educaiton in Turkey", Bakioğlu & Levent, 2013, *Journal of Gifted Education Research, 1*(1).

A multi-model which includes four different type, is implemented for gifted education in South Korea. Population of this country had been 50.062.000 since 2009 and The special education had been provided to 112.865 gifted students since 2012 by goverment. In addition, Table 6 shows that there are four formal school for gifted students (Bakioğlu & Levent, 2013).

h) High teacher salaries

One of the most important factor which effects employees' productivity and job satisfaction, is salary received in return. Teachers' salaries are upper than many countries and it increases according to the degree in South Korea. In addition, teachers' salaries are higher than other university graduates only three countries which are Spain, Portugal and South Korea. According to the PISA data if the countries are compared, there is a relationship between students' performance and teachers salaries (Süngü, 2012). Thereto, the continuous development of teachers is forced paralelly with elevation of teachers's salaries. In other words, high salary brings extra obligation.

Tablo 7

Teacher Salaries in some OECD Countries

Country	The institution of teacher work							
	Primary				Secondary			
	Starting salary	Salaries in next 10 years	Salaries in next 15 years	Most of Senior Teacher Salaries	Starting salary	Salaries in next 10 years	Salaries in next 15 years	Most of Senior Teacher Salaries
Swiss	53.599	67.942	-	83.105	61.437	79.032	-	94.038
Germany	53.026	-	64.491	70.332	57.357	-	69.715	79.088
S.Korea	**27.476**	**41.268**	**48.146**	**76.423**	**27.476**	**41.268**	**48.146**	**76.423**
Austria	32.973	40.124	45.105	64.510	33.398	35.975	46.317	67.444
Netherlands	38.941	53.256	63.695	66.117	38.941	53.256	63.695	66.117
Ireland	34.604	49.060	54.954	62.166	34.604	49.060	54.954	62.166
Japan	26.031	38.665	45.741	57.621	26.031	38.665	45.741	59.197
Denmark	43.461	48.616	50.332	50.332	44.710	58.347	58.347	58.347
Canada	35.534	53.631	56.349	56.349	35.534	53.869	56.569	56.569
Spain	39.693	43.222	45.689	55.603	40.308	43.945	46.479	56.536
U.S.	37.507	43.841	45.950	56 364	38.012	44.891	49.414	56.303

Portugal	30.946	37.152	39.424	52.447	30.946	37.152	39.424	52.447
France	28.653	33.970	36.159	52.090	28.892	34.209	36.398	52.352
Australia	34.746	49.144	49.144	49.144	34.746	49.144	49.144	49.144
Finland	33.034	38.601	40.917	43.372	34.008	41.636	43.302	45.900
England	30.289	44.269	44.269	44.269	30.289	44.269	44.269	44.269
Italy	29.418	32.588	35.922	44.059	29.418	33.380	36.928	46.060
OECD Avg.	**30.216**	**37.213**	**39.934**	**48.177**	**31.348**	**38.899**	**41.665**	**50.119**

Source: "Education at a Glance 2013", adapted from OECD (2013)

The salaries of teachers are examined according to institution of teacher work (primary-secondary schools) and teachers seniority (started, 10 years seniority, 15 years seniority and most senior teachers). According to the table, teachers' gross salaries are changed between $27.476 and $76.423 in South Korea. Teacher salaries rises depending on professional experiance and the wage is much more than many OECD countries. If look at the senior primary and secondary teachers' salaries ($76.423), it indicates that highly more than OECD average ($50.119).

5. Discussion and Conclusion

When developed countries are examined it shows human resources is the greatest treasure instead of the wealth of underground resources. These countries educate required number and characteristic of manpower thanks to well functioning education system. Economic development is possible with develop technology to increase production, use effective all natural resources and capital. In other words, most important factor of economic development comes trained manpower.

South Korea has become an economically developed country which was dependent on external aid case in the 1960s, since 2005 engaged in technology transfer to the outside world. Five Year Economic Development Plans has a major role in the development of South Korean which is prepared by "Economic Planning Board" between 1962 to 1997. Analyzing the factors underlying this progress, producing skilled manpower seems to be a very important place in education. In particular, the education reform movement began in the 1980s reflections has been the driving force of the economy by meeting the needs and expectations of the business world.

Scientific researches shows that there is a significant relationship between economic indicators and the international student assessment exam results. South Korea is attracted attention with the success in PISA and TIMMS which are the international student assessment exams. In this country, students can learn a time of need thanks to adopt the concept of lifelong learning, aiming at learning at work and prefer technological possibilities instead of classroom. Besides, South Korea's national assessment exam CBAS gives priority to the technological competence because of this approach.

The national curriculum appication based on equality of opportunity in education is an important factor of South Korea's success in education. The student centered approach is adopted in the national curriculum after 1987. The timing of this practice occurs in line with the economic development of South Korea. In addition, it wouldn't be misleading to state that innovation and technology play critical roles in Korea's education success within the last 30 years.

In addition to South Korean being a World-renowed tech giant and the prevalence of the use of information technology in education, the education system drifts away from standard education understanding and shifts towards the online environment day by day. Distance education has been adopted by the community and has brought a solution to many problems despite of negative opinion defenders of traditional education. The major of the problems is inequality of opportunity in education and crowded classrooms. In particular, South Korea gives significant support to lifelong learning due to the adopted adult education policies. Therefore, both the education level of society and achievements in field of business are increased.

References:

Abelmann, N., Kim, H., & Park, S.J. (2005). The uneven burden of vitality: college rank, neoliberalism, and South Korea's 'new generation'. In Y.-K. Kim-Renaud, R.R. Grinker, & K.W. Larsen (Eds.), *Korean Education* (The Sigur Center Asia Papers, 24; pp. 33-52). Washington, DC: The George Washington University Press. Retrieved April 20, 2013, from http://www.gwu.edu/~sigur/pubs/SCAP24-KoreanEd.pdf

Aras, S., & Sözen, S. (2012). Türkiye, Finlandiya ve Güney Kore'de öğretmen yetiştirme politikalarının incelenmesi. *[Examining teachers' training policies Turkey, Finland and South Korea]* X. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi (p 1-9). Niğde: Niğde University.

Arslanhan, S., & Kurtsal, Y. (2010). *Güney Kore inovasyondaki başarısını nelere borçlu? Türkiye için çıkarımlar [What South owns Korea success in innovation? Inferences for Turkey]*, TEPAV.

Bakioğlu, A. & Levent, F. (2013). Üstün Yeteneklilerin Eğitiminde Türkiye için Öneriler. [Suggestions for Gifted Education in Turkey], *Journal of Gifted Education Research, 1*(1), 31-44.

Bakioğlu, A. & Baltacı, R. (2013). Güney Kore eğitim sistemi. [South Korea's Education System] (Editor: Ayşen Bakioğlu), *Karşılaştırmalı Eğitim Yönetimi [Comparetive Education Management]*, Nobel Academic Publishing, Ankara.

Cho, S. & Kim, H. (2003). Enrichment programs for nurturing creativity of the Korean gifted. *Gifted Education International, 18*(2). 153-163.

Clauson, L., & Hatfield, R. (2011). The educational system of South Korea. *AACRAO International Education Services*, Retrieved November 19, 2013, from: http://handouts.aacrao.org/am11/finished/W0800a_L_Clauson.pdf

EF (English First). (2013). English proficiency index-South Korea. Retrieved November 23, 2013, from: http://www.ef.com.tr/epi/spotlight/south-korea

IMF (The International Monetary Fund). (2013). Republic of Korea and The IMF. Retrieved November 25, 2013, from: http://www.imf.org/external/country/kor/index.htm?type=9998

IGEME (Başbakanlık Dış Ticaret Müsteşarlığı İhracatı Geliştirme Etüd Merkezi). (2011). Güney Kore Cumhuriyeti Ülke Raporu. *[National Report of South Korea Republic]. Retrieved December 29, 2013 from:* www.een.kso.org.tr/up/dene/Guney_Kore_ulke_raporu_2011.pdf

İpek, C. (2011). Güney Kore eğitim sistemi. [The Educational System of South Korea.] A. Balcı inside, *Karşılaştırmalı eğitim sistemleri. [*Comparative Education Systems*]* Ankara: Pegem Publishing.

Jung, I., Wong, T., Li, C., Baigaltugs, S., & Belawati, T. (2011). Quality assurance in Asian distance education: diverse approaches and common culture. *The International Review of Research in Open and Distance Learning, 12*(6), 63-83.

Kim, J. W. (2004). Education reform policies and classroom teaching in South Korea. *International Studies in Sociology of Education*, 14, 125-145.

Kim, G. (2005). *Education policies and reform in South Korea (Human Development Network, Education)*. Washington, DC: The World Bank.

Kim, E. (2007). The quality and qualifications of the teaching force in the republic of korea. In R. M. Ingersoll (Ed.), *A Comparative Study of Teacher Preparation and Qualifications in Six Nations*. Retrieved May 17, 2013, from: http://files.eric.ed.gov/fulltext/ED498318.pdf

Koo, S. (2008). The role of institutional research in the development of open and distance learning: a case study from Korea National Open University. *Indian Journal of Open Learning*, *17*(1), 7-23.

KOSIS (Korean Statistical Institute). (2014). ***Economically Active Population Survey***, Retrieved February 18, 2014 from: http://kosis.kr/nsieng/view/stat10.do

Kutanis, R. Ö., & Tunç, T. (2010). Güney Kore Örgüt Kültürü: Konfüçyanizm'in Etkileri Açısından Bir Değerlendirme [South Korean Organizational Culture: An Evaluation in The Effects of Confucianism]. *Erciyes University İİBF Journal*, *35*, 55-75.

Kwon, O. N. (2004). *Mathematics teacher education in Korea*. Retrieved May 17, 2013, from: http://matrix.skku.ac.kr/for-icme-11/ICME/cp9.pdf

Lee, J. (2002). *Education policy in the Republic of Korea: building block or stumbling block?* Washington: School of Economics Seoul National University.

Lee, J. K. (2000). Main reform on higher education systems in Korea, *Revista Electronica de Investigation Educativa, 2*(2), 61-76.

Lee, M.-K. (2008). *The PISA Results and the Education System in Korea*. Korea Institude of Curriculum & Evaluation. Retrieved December 21, 2013 from: http://www.isei-ivei.net/eng/evaleng/ponencias-ingles/educaiton_in_Korea_MKLEE.pdf

Lee, M., Cho, S., & Lee, H. (2006). The effects of acceleration on the social and emotional adjustment in the colleges. *The Journal for Gifted Education, 17*(2). 56-73.

Levent, F. (2011). *Üstün yetenekli çocukların hakları [Gifted children rights]*. Children's Foundation Publications, İstanbul.

Lim, J. H. (2005). Class reproduction and competing ideologies in Korean K-12 education: a critical discourse analysis on 'school collapse' between 1999 and 2001. In Y.-K. Kim-Renaud, R.R. Grinker, & K.W. Larsen (Eds.), *Korean education* (The Sigur Center Asia Papers, 24; pp. 17-32). Washington, DC: The George Washington University Press. Retrieved April 20, 2013, from http://www.gwu.edu/~sigur/pubs/SCAP24-KoreanEd.pdf

MOE. (2014a). Educational administration and finance. Retrieved January 15, 2014, from: http://english.moe.go.kr/web/1700/site/contents/en/en_0212.jsp

MOE. (2014b). Teacher education and qualifications. Retrieved January 15, 2014, from: http://english.moe.go.kr/web/1701/site/contents/en/en_0213.jsp

NUFFIC (Netherlands Organisation for International Cooperation in Higher Education). (2013). "Country module: South Korea". The Hague: NUFFIC, Retrieved December 11, 2013, from: https://www.nuffic.nl/en/library/country-module-south-korea.pdf

OECD. (2013). Education at a glance 2013: OECD indicators. OECD Publishing. Retrieved December 09, 2013, from: http://dx.doi.org/10.1787/eag-2013-en

OECD. (2014). *PISA 2012 Results in Focus*. Retrieved January 07, 2014, from: http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf

QS. (2013). World University Rankings 2013. Retrieved December 15, 2014, from: http://www.topuniversities.com/university-rankings/world-university-rankings/2013

Peuch, J. (2011). The educational system in South Korea: a case study. Retrieved December 08, 2013, from: http://jpeuch.files.wordpress.com/2011/12/jonathan-peuch_the-korean-educational-system-in-globalization.pdf

Porter, C. (1998). *The competitive advantage of nations.* New York. The Free Press.

Seth, M. J. (2005). Korean education: a philosophical and historical perspective. In Y.-K. Kim-Renaud, R.R. Grinker, & K.W. Larsen (Eds.), *Korean education* (The Sigur Center Asia Papers, 24; pp. 3-16). Washington, DC: The George Washington University Press. Retrieved April 20, 2013, from http://www.gwu.edu/~sigur/pubs/SCAP24-KoreanEd.pdf

Süngü, H. (2012). Bazı OECD ülkelerindeki öğretmen maaşlarının karşılaştırmalı bir analizi. [A comparative analysis of teachers' salaries in some OECD countires]. *Education and Society*, *1*(2), 21-45.

TIMSS. (2013). International Database. Retrieved December 17, 2013 from: http://timssandpirls.bc.edu/timss2011/internationaldatabase.html

UNESCO. (2010). *E-Learning in the Republic of Korea.* Moscow: UNESCO.

WIPO (The World Intellectual Property Organization). (2012). IP Facts and Figures. Retrieved December 17, 2013, from: http://www.wipo.int/export/sites/www/freepublications/en/statistics/943/wipo_pub_943_2012.pdf

Worldbank. (2012). *Public spending on education, total* (% of GDP). Retrieved December 17, 2013 from: http://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS/countries

Yoo, C. & Winsor, R.D. (2009). The changing face of Korean marketing management. In C. Rowley and V. Yukongdi (eds.), *The Changing Face of Korean Management*. London: Routledge.

Yücel, C., Karadağ, E., & Turan, S. (2013). *TIMSS 2011 ulusal ön değerlendirme raporu.* [*National Preliminary Assessment Report of TIMSS 2011*] Eskişehir: Eskişehir Osmangazi University Education Faculty, Reports Series of Education Policy Analyze I.