

A study on comparison and integration between educational institutions of South and North Korea

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The purpose of this study is to compare educational institutions of South and North Korea in terms of forms, contents, formal and informal aspect in order to derive major issues when seeking for integration measures between the different institutions in the future. The definition of major concepts, research direction, contents, method and results used in this study to achieve the purpose are as follows.

■ Definition of major concepts and research directions

In this study, the concept of an educational institution is defined as ‘a vertical and horizontal linking structure of schools in a society ’ and the structure was examined into two aspects which are forms and contents. The forms of an educational institution indicate the external frame of school education such as educational stage, period of education, selection and graduation, school types, etc. The contents of an educational institution indicates school curriculum which is the contents of educational programs.

Also, in order to understand an educational institution as a institution rather than as

a system, this study focused on characteristics and changes of legal and customary frames related to school education rather focusing on organic connection among the components.

Based on these concepts, the research scope was limited to basic educational institutions by excluding special or collateral educational institutions such as civil education centers, distant colleges, etc in order to ensure direct comparison between educational institutions of South and North Korea. In addition, the research scope includes not only formal aspect of educational institutions regulated in the legislation and rules but also informal aspect such as norms and customs.

■ Research contents and methods

The number of research contents categories is six. First, the major social and educational indicators that are available were compared between two Koreas. Also, the transition processes of educational institutions of two Koreas were compared to understand how current educational institutions have been formed. The formal aspects of educational institutions in South and North Korea were compared in terms of forms and contents. Especially, as the analysis of school curriculums, the general introductions, mathematics and sciences of national curriculums of two Koreas were analyzed. The reason why mathematics and science which are less ideological were selected is to identify the differences of academic contents between South and North Korea. In order to identify the differences from informal aspects, how the members of both societies understand the meaning of school education by each stage was analyzed. Also, case studies on educational integration in Germany, educational exchanges between China and Taiwan, EU's integration of higher education were conducted to get implications for integration measures between the educational institutions in South and North Korea.

In order to compare the meanings of school education that members of the society understand, conferences were held participated by the teachers in South and North Korea. In addition, interviews were conducted to four North Korean refugees, former teachers in North Korea, to gain general understanding in educational institutions in North Korea and elaborate the questionnaires to be used in the conference. The two

conferences participated by South and North Korean teachers were conducted separately and 12 teachers who participated in the conferences have been selected considering the educational stages, regions, ages and genders. The results of the conferences were coded using Nvivo 10 program.

1st, 2nd research documents were analyzed for the comparison of social and educational indicators, the changes of educational institutions, and the structure of current educational institutions of two Koreas, and for foreign case studies. Especially, a relevant expert was involved for the case analysis on educational exchanges between China and Taiwan. Expert conferences were held to get more understanding on educational institutions in North Korea. The measures to integrate educational institutions in South and North Korea were discussed through workshops.

■ Research results

○ Comparison of social and educational indicators in South and North Korea

The territory size of North Korea is slightly larger than that of South, but South Korea is twice larger in population than North. The speed of aging is faster in South Korean than North, therefore the rate of population in school age of South Korea is smaller than North. The income gap is being consistently enlarged and that led to difference in various indicators in life.

Both South and North Korea demonstrated the decrease in the number of primary school students. North Korea was 47.2% compared to that of South Korea in 2012. According to the formal North Korea educational institution, students were required to enter primary school at the age of six but the statistics showed that the number of primary school students at the age of six was extremely small. Therefore, it was estimated that most of the students entered primary schools at the age of seven. The number of students in secondary educational schools of North Korea was 62% compared to that of South Korea in 2012. In North Korea, there was no statistical data about the number of graduate school students. Therefore it was difficult to compare the statistics by classifying universities and graduate schools separately. In 2008, the gap between South and North Korea in the number of higher education students including universities and graduate schools was extremely high which was 5.4 times larger in

South Korea than North. The population of higher education in South Korea was twice larger than North, the tendency of higher education population being concentrated in certain areas was stronger in North Korea.

North Korea demonstrated slight less the school enrollment ratio of primary school than South Korea but the school enrollment ratio of middle school in North Korea was higher than South. In 2012, the number of students per a teaching staff in South was lower than North in terms of primary and high schools but it was similar between two in the middle school level. The number of primary school students per a class in North was larger, but that of middle school students per a class in South was larger. The average teaching hours of teachers in South Korea was less than North and the gap was larger in primary level in 2012.

○ Comparison of transition processes of educational institutions between Two Koreas

After the independence, the change of educational institutions and expansion of compulsory education in South and North Korea showed different aspects. In South Korea, there had been numerous changes just after the independence and 6-3-3-4 system was determined in 1951 and it has been maintained until now. In North Korea, there has been six transitions in educational institutions. In South Korea, there was no change in educational institutions after that, however the entrance examination system has been changed by accepting the educational needs and the expansion of school education.

After the independence, the expanding of compulsory education in common education level has been one of the major issues in both South and North Korea. In South Korea, the legal basis for primary education as compulsory education has been prepared right after the establishment of South Korean government. In terms of lower secondary education, the legal basis was prepared in 1980s when complete schooling was achieved and compulsory education free of charge was implemented during early 2000s while upper secondary education has not been designated as compulsory education. In North Korea, the expansion of school enrollment ratio and the range of compulsory education were progressed at the same time from primary education to secondary education. In 1950s, 4-year primary education was designated as compulsory education and the range was expanded to 7, 9, 11 years and recently, 12-year

compulsory education free of charge was announced.

In terms of technical education, both South and North Korea expanded secondary technical, vocational education during the period of industrialization and showed common tendency to reduce them since then. Also, South and North Korea demonstrated a common tendency that the education for gifted children was introduced when the expansion of primary education was near completion. However, North Korea focused on establishment and expansion of general schools for gifted children while South Korea focused on establishment of special-purpose high schools for the students superior in special domains.

The expansion of higher education showed different aspects in South and North Korea. In South Korea, the higher education population has been rapidly expanded after 1980s in correspondence to the needs for advanced technology manpower. Since 2000s, the higher education enrollment ratio exceeded 60% and it recently reached near 70%. On the other hand, in 1980s, North Korea presented the introduction of higher education as compulsory education as one of the policy objectives but higher education failed to be expanded in reality. Recently, it is estimated that higher education enrollment ratio is below 20%.

○ Comparison of educational institutions in South and North Korea

[Basic frame of the educational institutions]

The biggest difference in the educational institutions in South and North Korea is in the existence of private sectors and it is the most distinguished difference prevalent in all educational stages. The length of compulsory education is 12 years in North Korea and 9 years in South Korea. The biggest difference in early childhood education is also in the level of government involvement. In South Korea, kindergarten education is not compulsory and there are private educational facilities which cause cost burden to the parents and the parents have the choice to choose the facilities. In North Korea, there are no private kindergartens and the 2nd year('Higher class') of 2-year kindergarten education is included in the compulsory education. 'Higher class' education in North Korea kindergartens claims to support preparations for primary education while South Korea kindergartens focus on the aspect of early childhood education.

Primary education is compulsory in both South and North Korea but there are unauthorized alternative educational facilities in South Korea and the period of education is 5 years in North Korea and 6 years in South Korea. In terms of funding for primary education facilities, 100% of the funding is covered by national finance in South Korea, while financial support organizations are connected to the schools in North Korea. During the educational period, the teacher in charge is changed every year in South Korea while it is maintained in North Korea. Also, in North Korea, there are certain organizations that every student should participate. ('Boy Scouts')

There is a distinguished difference in educational facilities for gifted children during early stage of secondary education between two Koreas. In South Korea, there is no distinct hierarchical structure while in North Korea, the 1st middle schools exist in the form of 6-year 'Schools for gifted children.' The selection process to enter the 1st middle schools or foreign language institutes(Specialized schools) is initiated at the graduating stage of primary schools,

In South Korea, the selection process is conducted when students enter the upper secondary schools and the hierarchy in upper secondary schools in South Korea is much more diverse. In South Korea, upper secondary education is not compulsory but it is in North Korea. In addition, in South Korea, upper secondary education is divided into general courses and vocational courses while in North Korea, there is no vocational secondary schools.

The biggest difference in tertiary education is in the size of enrollment and officialization of the ranking between universities. Tertiary education in South Korea is popularized while there is only a few higher education populations in North Korea. In South Korea, most of the universities are 4-year collegiate universities but colleges are more prevalent in North Korea. In South Korea, the ranking between universities is unofficially formed based on the preference of students and parents while in North Korea, the hierarchy is very official between collegiate, central and local universities. Other than that, in North Korea, vocational higher education facilities are being operated by reflecting the regional characteristics and many students in higher education facilities are discharged soldiers. In addition, in North Korea, university graduates are given with 'Qualification' not 'Degree.'

The difference of latter period tertiary education between South and North Korea is in the social status accompanied with the education. In North Korea, postgraduates hold the very high social status and only a few are allowed to enter while the degree is strictly controlled by the government. On the other hand, South Korea universities have the right to control autonomously it. In South Korea, the graduate schools are operated based on 'Credit system' which is that students have to finish certain credits to graduate. In North Korea, the course is based on 1:1 instruction with the professors.

[Educational curriculums]

- Introduction -

In the transition process of school curriculums, South Korea consistently focused on 'Autonomy', 'Decentralization', and 'Individual learner' while North Korea still demonstrates thought control intention through school curriculums such as expanding the subjects related to leaders despite of recent changes occurred by being conscious of international exchange such as seeking for practicality rather than ideology and focusing on the learning of the students such as integrated school curriculums and research learning process. In overall, the tendency is still maintained which is to assign standardized school curriculums in all schools.

In terms of organizing school curriculums, South Korea sets competency-based objectives under the 'humanitarian' ideal while North Korea sets objectives of national school curriculums to train military-first, revolutionary talents. In addition, North Korea government regulates detailed school schedules while South Korea is seeks for diversity in areas, schools and individuals. North Korea is consistently expanding leader-related education while South Korea focuses on general social education. In North Korea, the weight of subjects is differentiated by the educational levels. During primary education, weight of basic education is high such as art, music and physical education, Korean and mathematics and the weight of science and social education is increased in the higher level education. In South Korea, the weight of subjects is similar in all educational levels. In North Korea, the weight of extracurricular activities with designated range is high as one of the national school curriculums while in South Korea, extracurricular activities focus on experiential activities related to personality and career.

- Comparison of curriculum design: Mathematics-

In mathematics, the biggest difference in upper secondary education is that in North Korea, it is included as the common curriculums while in South Korea, as the elective curriculums during 2nd and 3rd grade. In terms of direction of the subject, despite of the difference in depth and range, both South and North Korea mathematics state that it is a subject seeking for student's mental discipline, practicality and usefulness for life. On the other hand, South Korea states cultural values and aesthetics as one of the directions of mathematics while North Korea sets the objective as "Loyalty to Kim, Jeong-eun and preparation as the successors to revolutionary achievements." There are many mathematical contents that are covered in different educational levels and grades between two Koreas. In terms of teaching·learning method, South Korea describes teaching·learning related contents in detail while North Korea roughly covers the contents and focuses that all the mathematical curriculums should be connected to political "Literacy." In the means of evaluation, South Korea mathematical curriculum describes evaluation principles and methods in detail while North Korea mathematical curriculum presents overall evaluation contents and methods but also covers detailed evaluation contents such as personality and attitude, knowledge and function, and problem-solving.

- Comparison of curriculum design: Science-

The difference in science school curriculums is similar to that of mathematics in terms of contents organization and subject directions. That is, the difference in organization of upper secondary education curriculums, focus on the affective objectives to maintain the political system in the direction of subject. In addition, as the objective of science education, North Korea focuses on "the possession of scientific knowledge' and states that 'knowledge' increases the learners' "cognitive skills and creative application abilities." In South Korea, science curriculum focuses on "scientific competency" and this scientific competency is stated as the ground for understanding of basic scientific concepts, scientific researches and attitudes and creative and reasonable problem-solving. There are differences in the range of contents and achievement standards. In South Korea, four categories, which are substance, energy,

biology, earth science are equally divided and assigned while in North Korea, the weight of sub-categories is different by educational levels. In North Korean primary education, the range of earth science is smaller than that of South Korea while the range of substance and biology is larger. In the lower secondary education, the contents of scientific curriculum are expanded dramatically compared to primary education. In terms of teaching and learning method, South Korea presents detailed teaching and learning methods by classifying into five items which are instruction plans, material preparations and usages, instruction methods, experience·practices, scientific teaching and learning supports. On the other hand, North Korea only presents basic principles that should be observed during instruction and writing textbooks. Moreover, in North Korea, using Chinese characters and expression is prohibited, therefore there are differences in the scientific terminologies. The differences in evaluation are similar to those of mathematics.

■ Meanings that social members of South and North Korea attach to the educational institutions

[South Korea]

The objective of school education in South Korea is to maintain or escalate the social status through education. Each educational level contains the significance to gain competitive advantages over other people and this mechanism is operated since kindergarten. The needs for child-care is one of the sides of kindergarten education but on the other side, it is also understood as the opportunity to take the advantageous position in school education. For this reason, education during this period is considered as necessary education since it is recognized to be difficult to catch-up primary school education if the students do not learn Korean language and mathematic numbers in kindergarten. The essence of opinions by teachers in South Korea is that, the consistent competition to maintain or escalate social status brought the generalization of university education and postgraduate education is also being conducted under the thought that “getting left behind without graduate school degree.”

Due to competitive composition to gain competitive advantages over other people by learning more contents faster, the educational gap between classes is getting bigger and

increased the level of school curriculums led to a situation that students cannot follow school curriculums by only school education. As a result, people should admit that it is difficult to catch-up school education without attending hakwon. The increased level of school curriculums lay academic burden to the students in every educational level thus there is no enough opportunity for the students to gain social abilities that should be learned during each age step.

It is evaluated that increased level of school curriculums is creating students falling behind in the school education. Stragglers are created since beginning of primary school education, therefore students have to rely on private education.

Lower secondary education is regarded with no clear objective, and the issues caused by excessive competitions are raised in this level. There is a positive movement in recent policies to make the education during this period as the most abundant time to spare(Free learning semester).

Various policies to support specialized high schools led to the situation that students with high academic abilities entering specialized high schools and students with low academic abilities entering general high schools. It is interpreted that this is the cause of current hierarchical structure of high schools by expanding the educational gap among students in general high schools. Currently, people recognize that entering specialized high schools such as science high schools and foreign language high schools is led to success in entering “major” universities. There are many students who give up studying in upper secondary schools. Even so, few students quit attending high school since graduating high school is being recognized as an important factor for regionalism in South Korea.

There are abundant universities without any unique characteristics and anyone can go to university if they can afford educational expenses. As a result, the social value of university degree is being decreased but still everyone desires to go to university and university hierarchical structure is also firm.

Due to decreased value of university degrees, the purpose of graduate school is to gain competitive edge in employment or promotion rather than academic objectives. Obtaining a doctor's degree means to be an expert in the field but it is not always useful to be employed.

[North Korea]

In school education of North Korea, going to 'university' is also considered as the most important objective and the desire to go to university is getting stronger. 'University' is considered as prerequisites to gain professional occupations or to become 'executives' in the party.

However, competition is not fierce in North Korea. The final destination of the competition is to enter university and the competition is progressed by two steps. The 1st competition is related to entering the 1st middle school and the last competition is connected to entering university. First of all, most of the students entering the 1st middle school can enter university. On the other hand, in general middle schools, only about 10% of the students can go to universities so the schools pre-select students with possibilities and concentrate investments to them to gain university admission performance.

Private economy sector and social class effect on school education are being expanded in North Korea. This is evaluated to be the main cause changing the characteristics of compulsory school education. For instance, the subjects required for entering university are 'Korean' and 'Mathematics' and the economic power of the parents greatly affect on mathematics learning of their children. Upper class parents can send their children to schools with talented mathematics teachers and exercise influence on making mathematics teachers be their children's homeroom teachers. If they think that school mathematics education is not enough to go to the 1st middle school, parents with financial power make their children to receive private lessons outside of school.

During kindergarten, the influence of parents is exercised mainly on specialty education. 2nd grade in North Korea kindergarten is recognized as necessary not because it is compulsory but because it is preparation for primary schools. 'Kindergarten higher class(2nd grade)' is officially compulsory but in reality, there are some families that cannot send their children to kindergarten due to cost burden while other families with economic power send their children to kindergartens with teachers who have special abilities such as playing a musical instrument, ballet, etc. However, general families send their children to kindergarten near their homes.

The fact that specialty education is considered important and social status is demonstrated by that, indicates the possession of speciality has special significance in North Korean society.

Even though only a few participate in the competition to enter university, people think that it is required to graduate middle school(Advanced middle school) with good grade because of the school evaluation paper. Evaluation papers are written under the responsibility of the principal, the homeroom teacher and the director of youth league and they follow the individuals in every organization they belong after graduation.

In North Korea, university education is recognized as terminal education. In general, graduating university is considered to finish school education. Therefore, people's interest in school education is up to university. Only a few receive postgraduate education and most of university faculties have para-doctor's(master) degree. In local universities, there is only one doctor in the college and they are recognized as the 'top' experts in the field and primary and secondary school teachers look up to a doctor as "a minister."

■ Overseas cases

- Integration of educational institutions in unified Germany

The integration of education institutions in unified Germany is a case that distinguished two institutions are integrated into one during short time. In Germany, consistent cultural exchanges between East and West Germany before unification created trust and experiences in both parties, which had significant influence on the integration of educational institutions. Before unification, temporary measures were taken so that academic degrees obtained in East Germany can be admitted in West . It indicates that it is very important for South and North Korea to create trust by exchanges and cooperation before the unification. The integration of educational institutions in East and West Germany indicates that institutional reorganization should be planned and take place under maintenance of regular school activities. Various measures will be required to operate North Korean schools more stably since their relative environmental status would be inferior compared to South Korean's. In this sense, supports towards North Korea should take place before the unification to create

basic infrastructure required for educational integration. During integration of educational institutions in East and North Germany, schooling population in East was decreased due to the movement of population and people in East Germany requested for expansion of tertiary education since their opportunities to go to university have been limited until then. For this reason, when preparing for education integration between South and North Korea, comprehensive analysis should take place by taking various factors into consideration such as educational demands, development prospect of the region, population change, birthrate prospect, etc. In addition, educational integration in Germany adopted education institutions of West to East without enough reviews on East's. As a result, it is evaluated that positive factors of East were vanished after the integration. This case indicates that it is required to train experts who can compare and understand educational institutions in South and North Korea to prepare for unification.

- Exchange of tertiary education between China and Taiwan

In 1987, Taiwan was allowed for people to visit Chinese continent and exchanges between two countries were initiated. The key findings and implications we can take away by the exchanges of tertiary education between China and Taiwan are as follows. First, China is more proactive and is leading the exchanges with Taiwan. Second, vocational education accounts for the highest percentage in those exchanges, and China has great interests on it. Third, the exchanges and collaboration related to tertiary education was directly affected by the type of government coming to power in Taiwan. Fourth, the reason that exchange of tertiary education is consistently being developed despite of ups and downs caused by political issues, is because of the private sectors which produced the social demands. Fifth, the educational exchanges in China and Taiwan are being progressed and developed from the aspect of China's overseas Chinese policy. Sixth, Taiwan is focusing on individual-based study-abroad while China is focusing on vocational education exchanges to train manpower required for economic development. Seventh, education exchanges are closely linked to political and economic factors and educational exchanges take place after economic exchanges. The case of educational exchanges between China and Taiwan has following

implications. First, it is required to create demands for educational exchanges by gradually inducing economic opening of North Korea. Second, considering asymmetric relationship between South and North Korea, exchanges in private sectors are required to create basis for further exchanges. Third, preparing for economic exchanges between South and North Korea, it is required to prepare for conducting vocational talent training projects as a means of multi-lateral exchanges in tertiary education.

- EU's integration of educational institutions for tertiary education

Since Bologna Declaration in 1999, educational and cultural cooperation was started between EU members. Before then, the exchanges and cooperation were conducted based on the principle of subsidiarity which is EU performs supplementary role focusing on sovereignty and cultural diversity of each nation. However, next exchanges and collaboration were conducted based on the new paradigm, which is convergence or harmonization of European tertiary education. The EU members and related educational organizations agreed to create systems and structures that are 'easy to compare and understand.' The reason that they could reach the agreement for educational exchanges is because they could create comparable systems such as European Advanced Education Qualification Framework, ECTS credit standard, Diploma Supplement, etc. In addition, the fact that EU members agreed on the principle improving the competitiveness of tertiary education through cooperations was also the basis for the integration. EU executive committee performed various activities to devise comparison and evaluation tools to ensure mutual understanding and disseminate best practices during the process to establish diverse indicators and guidelines. All these activities made it possible for the EU members to compare the level of their tertiary education facilities with other nations and to change the policies accordingly. There are three implications to take away from European tertiary educational integration. First, during the preparation for the integration of educational institutions of South and North Korea, common tasks which can become the basic principle for the integration and both parties can contemplate, should be discovered. Second, indicators should be developed to compare the educational institutions of South and North Korea and the indicators should be shared with each other to promote

self-reform before the integration. Third, South and North Korea should share educational informations and initiate experiential projects and programs to ensure mutual exchanges by educational officials including students and teachers.

■ Measures to integrate educational institutions of South and North Korea

When devising measures for the integration of educational institutions of South and North Korea, certain topics could become issues such as difference in period of basic education, in total length of general education, school curriculums of South Korea of which the level is excessively high, different topic covered in school curriculums in each educational stage, difference in the direction for organizing school curriculums, expansion of education to idolize the leaders in North Korea, existence of vocational secondary schools, difference in hierarchial structure among secondary schools and selection time, rate of enrollment to tertiary education, and qualification standards, difference in hierarchial structure among universities, etc.

The measures for integration between educational institutions of South and North Korea are proposed as follows by classifying into direction, process and tasks.

〈Direction〉

- Aiming for future-oriented values and global standards
- Assuming gradual unification based on opening of North Korea

〈Process〉

- Setting objectives by stages
 - Period of exchanges and cooperation
 - : Mutual understanding on integration tasks agreement
 - Integration of frames
 - : Integrating the forms of educational institutions based on the objective, ‘education for all’
 - Integration of Contents
 - : Ensuring the quality of education by integrating educational contents
- Securing independent participation of the society members
- Attempting exchanges on tertiary education and non-ideological area as a first step

〈8 tasks for integrating educational institutions of South and North Korea〉

- ① Supporting educational infrastructure for North Korea
- ② Promoting educational policies considering integration in South Korea
- ③ Sharing educational materials and statistic data
- ④ Cooperation in the field of tertiary education related to economic area

- ⑤ Exchanging students and scholarship
- ⑥ Cooperation in the field of primary and secondary educational curriculums
- ⑦ Exchanging teaching staffs and cooperation in teacher training programs
- ⑧ Establishment of councils and enforcement system for educational cooperations and integration of South and North Korea

- keywords: South & North Korea, Comparison of Educational Institutions, Institutional Perspective, Social Meanings, Integration of Educational Institutions