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Korean Gifted Education: Domain-Specific Developmental Focus

Kore Üstün Yetenekliler Eğitimi: Alana-Özgü Gelişimde Odaklanma

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Abstract

The current Korean gifted education system is designed to help gifted children have a balance between excellence and emotional and social wellbeing. In this article, the current status of Korean gifted education is presented, reflecting on the history, purpose, theoretical foundation, infrastructure, and state of art of gifted education with statistics. This article concludes with the obstacles that gifted education faces and recommendations for expansion and diversification.

Key Words: gifted education, Korea, history, Confucian culture, intra-structure

Öz

Yürürlükte olan Kore üstün yetenekliler eğitim sistemi, üstün yetenekli öğrencilerin mükemmeliyet, duygusal ve sosyal iyi olma hallerini dengelemelerine yardımcı olacak şekilde tasarlanmıştır. Bu makalede güncel Kore üstün yetenekliler eğitimi, tarihine, amaçlarına, teorik temellerine, altyapısına ve gelişim seviyesine ışık tutacak istatistiklerle birlikte sunulmuştur. Ayrıca üstün yeteneklilerin eğitimlerinde karşılaşılan güçlükler ve önerilere yer verilmiştir.

Anahtar Sözcükler: üstün yetenekliler eğitimi, Kore, tarih, Konfüçyüs kültürü, altyapı

Background of Korean Gifted Education

Since the foundation of the Republic of Korea and its government, gifted education in Korea has grown rapidly in a relatively short period of time. There are some differences in opinion regarding the beginning of gifted education, but it can be safely said that the current gifted education in the public education system for the first time began with establishment of Kyeonggi Science High School, an affiliated school of science center of Kyeonggi province in 1983 (Cho, 2004; Lee, 2003). This science high school was established with the goal of nurturing the creativity of future scientists and engineers. This was a turning point after a long effort to control the negative side effects of competitive entrance examinations into middle and high schools. Educators and policy makers realized that the suppression of gifted education resulted in the decrease of human resources who can lead science and industrial development in Korea. Since 1987, when the Presidential Commission for Educational Reform included a recommendation for the promotion of gifted education, acceleration in regular schools through early entrance to elementary school and grade skipping got legal endorsement and Research Center for Gifted Education (Kim, Kim, & Cho, 1987) was designated and supported by government policy. Rationale for gifted education was established in Article 19 of the Fundamentals of Education Act (1997), thereby contributing to the establishment of legal base of gifted education (Kwon & Kim, 2009).

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The Gifted and Talented Education Promotion Act (GTEPA) was promulgated in 2000. The act specified responsibilities of schools, school districts, and the central government in providing gifted education programs for gifted students and building capacities of GATE teachers through basic, enriched, and advanced professional development. The law patronized the establishment of national high schools for the scientifically talented students and financial support for research and development on gifted education, intensive teacher training, and expansion of gifted education services provided by school districts. Since 2002, the government has designated and supported three national level research centers for gifted education. National Research Center on Gifted and Talented Education (NRCGTE) at the Korean Educational Development Institute, the Global Institute for Talented Education (GIFTED) at the Korea Advanced Institute for Science and Technology (KAIST), and Korean National Research Institute for the Gifted in Arts (KRIGA) at the Korea National University of Arts were established for the development of gifted education in general, in science and technology, and in arts respectively. Later, national gifted education promotion master plans were authorized every five years: 1st plan for 2003 - 2007, 2nd for 2008 - 2012, and the 3rd for 2013 – 2017 (Ministry of Education and Human Resources, 2002, 2007, 2012). As of 2015, education for the gifted and talented has received more public attention and has become an important part of education in Korea. At the same time, the Korean government is careful not to increase the negative side effects of gifted education on the socio-emotional well-being of gifted and all other children by confining gifted education services to outside of regular school hours for elementary and middle school students.

Purposes of Gifted Education

With regard to the purposes of gifted education in Korea, Article 1 of the GTEPA clearly stipulates the purposes of this act as "*to early identify persons endowed with talents and provide them with education tailored to their competence and talents as provided for in Articles 12 and 19 of the Fundamentals of Education Act in order to encourage them to develop innate potential, seek self-realization and contribute to development of the nation and of society".* The three purposes of the act are: educational innovation, actualization of high potential, and human resources development for the nation and society.

Educational innovation. Korean education has long focused on students' acquiring more knowledge and skills to get the best results at the high-stakes tests. Korean parents' excessive education fever and severe competitions among students have been barriers against developing gifted children's creativity and leadership. Gifted students were neither encouraged to take risks of failure nor to collaborate in team works to solve real world problems. On the contrary, the goal of the GATE program is to nurture creativity and leadership of gifted students in a global society. Therefore, both identification and curricular programming focus on creative problem solving and leadership. GATE may bring a tide of innovation and reform to the total school system as Renzulli (2004) illustrated how the quality of

education for all students can be enhanced by applying gifted education know-how (e.g., the schoolwide enrichment model).

Actualization of high potential of gifted students. The fundamental concept of special education is the delivery of education programs through an individualized education plan (IEP) to meet the needs of each student. Likewise, all GATE program alternatives such as ability grouping, differentiated curricula, and acceleration provide gifted and talented students with challenging enrichment opportunities for potential development. In particular, the gifted education system protects the right of the profoundly gifted prodigies to learn. The right to learn was advocated by parents of profoundly gifted children (e.g., prodigies in math) who do not benefit from regular gifted education services and was endorsed by modifying the GTEPA in 2005 (Korean Ministry of Government Legislation, Legislative Information Division, 2014). Upon formal recognition of profound giftedness, a child is provided with exceptional education services based on the child's needs such as dual enrollment in elementary or middle school and a local university, mentoring and counseling services by university faculty and staff members.

Human resources development. Gifted education in Korea has a national goal of producing creative scientists and artists who can contribute to rendering a society better or more beautiful. During the Korean economic crisis in 1998, consensus was reached on the need of a more serious support for gifted education, resulting in the promulgation of the GTEPA in 2000. Before the GTEPA, 16 science high schools existed under the supervision of the Ministry of Education based on the Elementary and Secondary Education Act. With the promulgation of the GTEPA in 2000, the Ministry of Science and Technology and Ministry of Culture and Tourism collaborated with the Ministry of Education to establish gifted educational institutions, to develop curriculum, instructional materials, and instruments; and to support professional development with the goal of producing creative scientists and artists.

Theoretical and Cultural Orientation

Giftedness as a developmental process. Cho and Lee (2015) states that there is no one specific theory which is formally endorsed for Korean gifted education. However, in practice, the concept of *giftedness as a developmental process* (Cross, 2011; Dai & Chen, 2013; Horowitz, Subotnik, & Matthews, 2009; Sosniak, 1985; Subotnik, Olszewski-Kubilius, & Worrell, 2011) is the dominant theory along with the influence of Confucian value in the practice of Korean gifted education. Excellent achievement originates from high potential (Simonton, 2010). However, its full actualization requires motivation, learning through experiences, and practice in specific domains (Bloom & Sosniak, 1981; Kalinowski, 1985; Lubinski, 2010; Park, Lubinski, & Benbow, 2008; Winner, 1996). Through a developmental process, the potential in children and adolescents is developed into eminence in adults (Feldhusen, 2005; Subotnik & Rickoff, 2010), which contributes to making better and more beautiful societies (Subotnik,

Olszewski-Kubilius, & Worrell, 2011). The concept of giftedness as a developmental process is well aligned with the practice of gifted education in Korea.

Cho and Lee (2015) claimed Korean Confucian culture has also influenced on students' belief that success is due more from effort than from inherent ability (Sorensen, 1994; Watkins & Biggs, 1996). Korean students tend to meet their parents' high expectation for their academic achievement (Cho & Campbell, 2011; Kim, Kim, et al., 1994). Therefore, extrinsic motivation for learning is very high (Cho & Lin, 2011; Kim, 2005; Lee, 2005). Consequently, Korean educators are concerned about students' intensive extrinsic motivation, which can harm the development of creativity to some extent (Amabile, 1983).

Korean GTEPA defines giftedness as "*those who have outstanding talent and require special education to actualize their potential*." Meanwhile GTEPA does not state what talent and potential mean, Renzulli's (1978) creative productivity of giftedness is the most preferred definition of giftedness and utilized in the practices of identification. Identification of students for gifted education is mainly conducted in each specific domain based on students' creative problem solving performance, which requires dynamic interactions among motivation, knowledge, and skills in general and in specific domains; critical thinking; and divergent thinking (Cho, 2003; 2006; Lin & Cho, 2011). Various creative problem solving tests in specific domains such as mathematics, science, information technology, and language arts have been developed and validated for identification of gifted education students.

II. State of Art of Gifted Education in Korea

Gifted Education and Support System

Infrastructure and service delivery model of gifted education. The infrastructure of Korean gifted education is comprised of a support system and gifted educational institutions. The support system is comprised of Gifted Education Law, National and Provincial Committees for the Promotion of Gifted Education, and three National Research Centers. Educational institutions for the gifted consist of specialized high schools for the gifted in science, foreign languages, arts, and sports; gifted education centers; and special classes for the gifted in regular schools. Gifted Education Centers are supported either by 16 Metropolitan/Provincial School Boards or the Ministries of Science and Technology, Information and Technology, and Culture and Tourism. Special classes are formed with students from a regular school or from several schools in the vicinity. In practice, special high schools for the gifted provide accelerated and enriched programs during regular school hours, whereas gifted education programs at gifted education centers and special classes for the gifted are implemented as extracurricular activities outside of regular school hours.

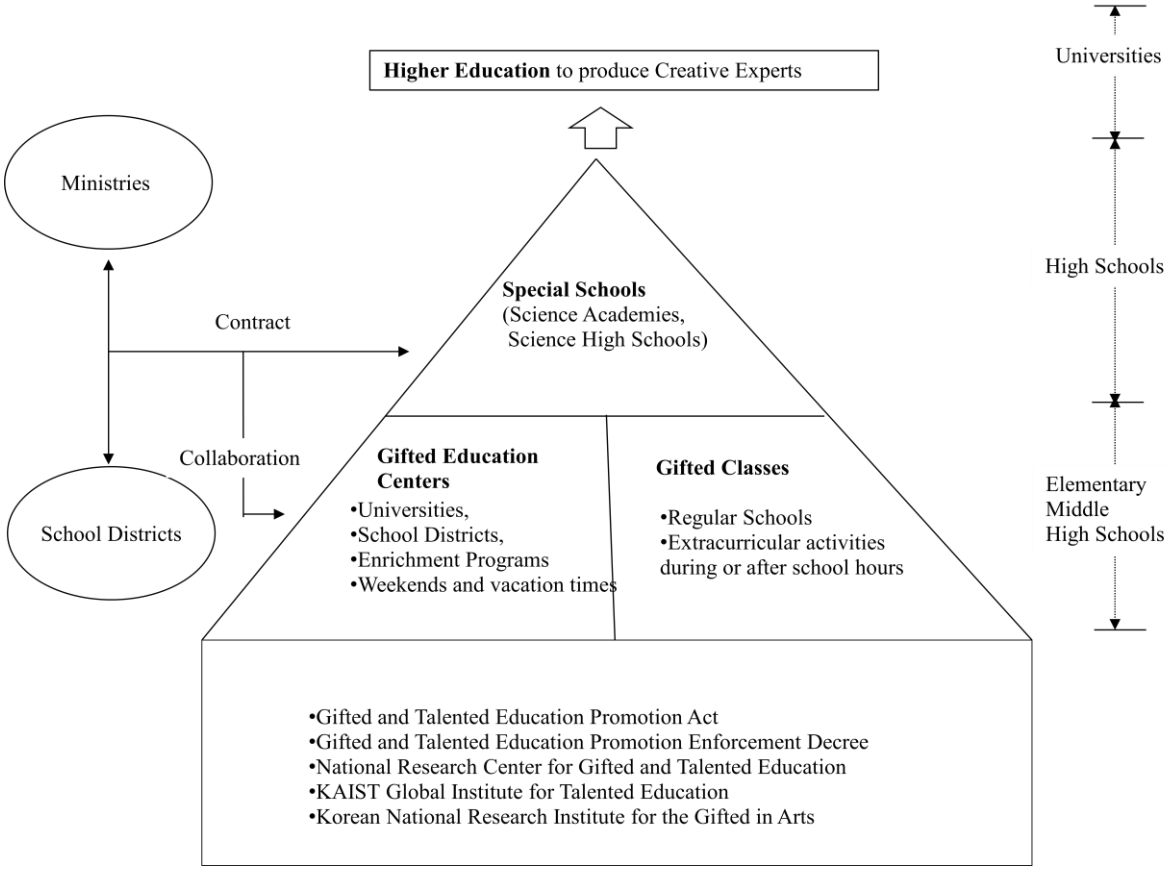

Figure 1. Korean Gifted Education Infrastructure (Source: Korean Ministry of Education and Human Resources, et al. (2002), p. 9)

Major status of gifted education. The actual conditions of gifted education beneficiaries and institutions since 2003 when gifted education came to be expanded by each municipal and provincial office of education are as follows.

Table 1. Number of Gifted Education Students by Year (2003~2013)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of gifted education beneficiaries	19,974	25,213	31,100	39,011	46,006	58,346	73,865	92,198	111,818	118,377	121,421
Ratio of the beneficiaries to all Students (%)	0.25	0.32	0.40	0.50	0.59	0.77	1.00	1.27	1.59	1.76	1.87

Source: GED (2013)

Table 2. Number of Gifted Education Centers (2003~2013)

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of gifted education institutions (GED, 2013)	400	415	488	575	663	867	1,280	1,840	2,586	2,868	3,011

As can be seen in Table 1, the number of gifted education students was 31,100 at the rate of 0.4% of all students in 2005, but the ratio of the gifted education students to all students amounts to approximately 1.9% in 2013. In 2012, the ratio exceeded the target figure of 1% of the 2nd gifted education master plan and leads to expectation that the number of gifted education students will increase continuously as shown in current data. In addition, the number of gifted education centers has rapidly increased to 3,011 in 2013, which is more than 6 times of the 488 centers in 2005.

Looking at the 2013 gifted education status by domains presented in Table 3, the scope of gifted education is divided into 11 domains, among which the number of students in mathematics and science (integrated) constitutes 50.7% of the total student enrollment in gifted education students. In addition, the total number of students in domains related to science (mathematics, science, invention and information) is about 89.8% of the total number of gifted education students, which leads to conclusion that gifted education of Korea is focused on mathematics and science related areas, and education in other areas including languages, arts and cultural sciences is being carried out within the rate of less than 10%.

Table 3. Number of Gifted Education Students by Domains and Gifted Education Institutions

		Math	Science	Math/ Science	Invention	Information	Language	Music	Art	Physical education	Social Science	Other	Total
Gifted School				5,263									5,263
Gifted Class		9,783	8,911	47,577	1,978	823	1,709	854	906	439	1,587	289	74,856
Gifted Education Center	Office of Education	7,167	7,563	8,340	2,458	1,871	1,333	423	780	222	2,046	322	32,525
Gifted Education Center	Affiliated Organization of a College	2,177	4,047	405	43	683	262	272	177		335	376	8,777
Total		19,127	20,521	61,585	4,479	3,377	3,304	1,549	1,863	661	3,968	987	121,421

Source: GED (2013)

According to the Articles 25 to 27 of the Gifted and Talented Education Promotion Enforcement Decree (GTEPED), teachers in charge of gifted education are classified by gifted classes, gifted schools and gifted education centers as shown in Table 4.

Table 4. Categories of Teachers in Charge of Gifted Education

Institutions for gifted education	Teachers in charge of gifted education
Gifted School	Principal of gifted school
Gifted School	Assistant principal of gifted school
Gifted School	Teachers of gifted school
Gifted School	Professional counselor of gifted school
Gifted Class	Teachers in charge of gifted class
Gifted Class	Professional counselor of gifted class
Gifted Class and School	Librarian teacher
Gifted Education Center	Director of gifted education center
Gifted Education Center	Instructor

Source: Kim et al. (2010), p. 425

The qualifications (recruitment criteria) of teachers in charge of gifted education are specified in the same GTEPED (Articles 25 to 27), and teachers in charge of gifted education should have a teaching certification as stated by the elementary and secondary education act and complete a certain period of training courses recognized by a superintendent of schools or minister of education, science and technology. The status of teachers in charge of gifted education in 2013 is shown in Table 5. In proportion to the number of educational institutions, the number of teachers in charge of gifted class is the largest, followed by that of teachers from gifted education centers operated by office of education, followed by gifted education centers attached to a college and gifted school. The number of students per gifted education teacher turned out to be 4.5 persons.

Table 5. Status of Teachers in Charge of Gifted Education (2013)

Institution Type	Gifted Class	Gifted Education Center		Gifted School	Total
		Affiliated with Office of Education	Affiliated with Universities		
Number of teachers in charge of gifted education	15,720	7,842	2,118	1,134	26,814

Source: Korean Ministry of Education, Science and Technology & Korean Educational Development Institute (2013)

Problems and Future Directions

Problems

Cho and Lee (2015) listed problems in Korean gifted education as relatively small number of gifted students served, limited domains where students are identified; limited hours of gifted education services; and lack of alignment of gifted education in secondary schools and universities.

The ratio of gifted students served by gifted education is relatively small (less than 2%) compared to those found in the definition of giftedness (Gagné, 2003; Renzulli, 2004). Domains of of gifted education are concentrated in STEM and arts, ignoring talents in other domains. In addition, 4th grade is the earliest when children can be officially identified to participate in gifted education. Also, there is not enough effort or a system for identifying high potential students from disadvantaged backgrounds.

Gifted education hours for students in grades 4-9 are very limited, since they are not provided during the regular school hours, but mostly on weekends and a couple of weeks during the vacation time. Lack of alignment between educational programs for the gifted in high school and at the university minimizes the effects of gifted education at the secondary school level. University entrance examinations focus on achievement, whereas the goals and objectives of gifted education curriculum focus on creativity with acceleration. Those educated with a focus on creativity with acceleration in science high schools and science academies

cannot find challenging programs at universities. There needs to be a system in which universities recognize students' advanced accomplishments and allow for more challenging studies (Lee, 2003).

Future Directions

The 5 Year National Plan for the Development of Gifted Education (2013-2017) established through collaboration among four Ministries includes: Expanding the number of students and talent domains to be served with gifted education programs; developing a support system to improve the quality of educational programs through systematic differentiation of programs in different institutions for the gifted; enhancing the professional quality of teachers for the gifted; and providing more support for research and development on gifted education (Suh et al., 2012).

Ratio of students to be served with gifted education in Korea should be increased from 1.78% in 2012 to 10% in 2017 of all students. Gifted students should be identified earlier than age 10. Ten percent of them will be under-represented gifted students, including those who are culturally different, financially challenged, from geographically remote places, and with disabilities. To identify students of high potential, but not high achievement, teacher recommendations based on observations, portfolio, and performance assessments, should be used more (Suh et al., 2012). The domains of talent for gifted education should also be expanded from STEM and arts to such areas as humanities and social studies. Continuity in gifted education service between the grades and school levels needs to be strengthened.

To enhance the quality of gifted education, national standards for gifted education programs and a system for evaluating program effectiveness should be developed and utilized. Selected exemplary programs which are proven to be effective will be widely distributed. Consulting on the strengths and weaknesses of gifted education programs in each institution should be provided systematically by central and local governments. (Lee et al., 2013a; Lee et al., 2013b).

Since 2008, the central government launched educational policies to nurture creativity of students through multiple disciplinary or convergent approach for teaching and learning through collaboration among students and teachers with diverse backgrounds and experiences. Currently, multiple disciplinary approach is practiced rarely, since most of the gifted education has been compartmentalized by domains.

Gifted education is discontinued after students enter university, since colleges and universities do not provide more challenging programs for those graduated from specialized high schools or academies. Universities need to take on a more active initiative in offering more challenging programs. One way is to provide an honor's program for selected students or a special track that offers honors courses. It is also recommended to provide a seamless program for students to continue from undergraduate to doctoral programs by integrating them

into one so that students do not have to wait until they complete one program in order to participate in more challenging programs.

In order to improve the professional quality of teachers, it is recommended that experts and professionals in universities and research institutes should be allowed to mentor students in gifted education programs. Only six of the 24 science high schools for the gifted in Korea are allowed to hire scientists or engineers to teach gifted students. There needs to be more opportunities for professional development in gifted education to provide continuous training to teachers for the gifted.

References

Amabile, T. M. (1983). *The social psychology of creativity*. New York: Springer-Verlag.

Bloom, B. S., & Sosniak, L. A. (1981). Talent development vs. schooling. *Educational Leadership, 39,* 86-94.

Cho, S. (2003). Creative problem solving in science: Divergent, convergent, or both? In U. Anuruthwong, S. Hiranburana, C. Piboonchol (Eds.), *Igniting children potentials and creativity. Proceedings of the 7th Asia-pacific Conference on Giftedness.* Bangkok, August 12-16, 2002 (pp. 169-174). Bangkok, Thailand: October Printing.

Cho, S. (2004). *Gifted education white paper 2004.* RM 2004-64. Seoul, Korea: Korean Educational Development Institute (in Korean).

Cho, S. (2006, August). *Developing creative problem solving ability test for identification of the mathematically gifted.* Paper presented at the meeting of the 9th Asia Pacific Conference on Gifted Education, Taipei, Taiwan, July 31-August, 4, 2006.

Cho, S. & Lee, J. (2015). Gifted Education in the Republic of Korea: Nurturing Creativity of the STEM Talented Students. In D. Y. Dai & C. C. Kuo (Eds), *Gifted education in Asia: Problems and prospects (pp. 97-119).* Charlotte, NC: Information Age Publishing Inc.

Cho, S. & Campbell, J. (2011). Differential influences of family processes for scientifically talented individuals' academic achievement along development stages. *Roeper Review. 33*(1), 33-45.

Cho, S. & Lin, C.Y. (2011) Influence of family processes, motivation, and beliefs about intelligence on creative problem solving of scientifically talented individuals, *Roeper Review. 33*(1), 46-58.

Cross, T. L. (2011). *On the social and emotional lives of gifted children* (4th ed.). Waco, TX: Prufrock Press.

Dai, Y., & Chen, F (2013). *Paradigms of gifted education: A guide to theory-based, practice-focused research.* Waco, TX: Prufrock Press.

Feldhusen, J. F. (2005). Giftedness, talent, expertise, and creative achievement. In R. F. Sternberg & J. E. Davidson, (Eds.), *Conceptions of giftedness* (2nd ed., pp. 64-79). New York, NY: Cambridge University Press.

Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo and G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 60-74). Boston, MA: Allyn and Bacon.

Horowitz, F. D., Subotnik, R. F., & Matthews, D. J. (Eds.). (2009). *The development of giftedness and talent across the life span.* Washington, DC: American Psychological Association.

Kalinowski, A. G. (1985). The development of Olympic swimmers. In B. J. Bloom (Ed.), *Developing talent in young people* (pp. 139-192). New York, NY: Ballantine.

Kim, K. H. (2005). Cultural influence on creativity: The relationship between creativity and Confucianism. *Roeper Review, 27*(3), 186.

Kim, K. S., Kim, M. J., Park, H. I., You, Y. J., Yoo, E. H., Yoon, C. H., et al. (1994). College entrance exam, educational aspirations, and functional strategies of the Korean family. *Korean Journal of Family Research, 32*, 161–178 (in Korean).

Kim, M., Lee, M., Kang, B,, Kim, Y., Kim, I., Park, J., Suh, Y., Yoo, G., Lee, H., & Jeon, G.(2010). *Gifted education in Korea: Present status of gifted education and establishment of national standards.* CRM 2010-109. Seoul, Korea: Korean Educational Development Institute (in Korean).

Kim Y.S., Kim, Y.C., & Cho, S. (1987), *Recommendation of policies for development of gifted education*, Seoul, Korea: Presidential Committee for Educational Reformation. (in Korean)

Korean Ministry of Education and Human Resources (2002). *The 1st comprehensive plan for gifted and talented education*. Seoul, Korea: Ministry of Education and Human Resources (in Korean).

Korean Ministry of Education, Science and Technology & Korean Educational Development Institute (2013). *Statistics of gifted and talented education in 2012*. SM 2013-01. Seoul, Korea: Ministry of Education, Science and Technology & Korean Educational Development Institute (in Korean).

Korean Ministry of Government Legislation, Legislative Information Division (2014). *Gifted and Talented Education Promotion Act*. Retrieved November 23, 2014 from http://www.law.go.kr/lsInfoP.do?lsiSeq=136623#0000 (in Korean).

Kwon, E., & Kim Y. (2009). Analysis on the theme of thesis related to science education for the gifted: from 1980 to 2008. *Science Education for the Gifted, 1(2)*, 63-76.

Lee, C. J. (2005). Korean education fever and private tutoring. *KEDI Journal of Educational Policy, 2*(1), 99-108.

Lee, J. B., Kim, J.A., Seo, Y. W., Kang, B. J., Kim, K. R., & Lee, K. H. (2013a). *KEDI handbook of gifted educational institutions,* RR 2013-06-1. Seoul, Korea: Korean Educational Development Institute (in Korean).

Lee, J. B., Kim, J.A., Seo, Y. W., Kang, B. J., Kim, K. R., & Lee, K. H. (2013b). *Study on evaluation of gifted educational institutions at the national level*. RR 2013-06. Seoul, Korea: Korean Educational Development Institute (in Korean).

Lee, S. C. (2003). *Current state of art in science and technology education in Seoul National University.* Paper presented at the Public Hearing on Excellence Education at the Universities. Seoul, Korea: Seoul National University (in Korean).

Lin, C. Y. & Cho, S. (2011). Predicting Math creative problem solving with the Dynamic System of Creative Problem Solving Attributes. *Creativity Research Journal, 23,* 255-261.

Lubinski, D. (2010). Spatial ability and STEM: A sleeping giant for talent identification and development. *Personality and Individual Differences, 49*, 344-351.

Ministry of Education and Human Resources (2002). *The 1st comprehensive plan for gifted and talented education*. Seoul: Ministry of Education and Human Resources: Author (in Korean).

Ministry of Education and Human Resources (2007). *The 2nd comprehensive plan for gifted and talented education*. Seoul: Ministry of Education and Human Resources: Author (in Korean).

Ministry of Education and Human Resources (2012). *The 3rd comprehensive plan for gifted and talented education*. Seoul: Ministry of Education and Human Resources: Author (in Korean).

Park, G., Lubinski, D., & Benbow, C. P. (2008). Ability differences among people who have commensurate degrees matter for scientific creativity. *Psychological Science, 19,* 957-961.

Renzulli, J. S. (1978). What makes giftedness? Reexamining a definition. *Phi Delta Kappan, 60,* 180-184, 261.

Renzulli, J. S. (2004) *Identification of students for gifted and talented programs.* Thousand Oaks, CA: Corwin Press.

Simonton, D. K. (2010). Creativity in highly eminent individuals. In J. C. Kaufman, & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 174-188). New York, NY: Cambridge University Press.

Sosniak, L. A. (1985). Phases of learning. In B. J. Bloom (Ed.), *Developing talent in young people* (pp. 149-164). Leichester, England: The British Psychological Society.

Sorensen, C. W. (1994). Success and education in South Korea. *Comparative Education Review, 38*(1), 10-35.

Subotnik, R. F., & Rickoff, R. (2010). Should eminence based on outstanding innovation be the goal of gifted education and talent development? Implications for policy and research. *Learning and Individual Differences, 20,* 358-364.

Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest, 12*(1), 3-54.

Suh, Y., Lee, J., Yoo, K., Chung, Y., Park, J., & Lee, K.(2012). *A research for establishing the 3rd master plan for gifted education.* CR 2012-37. Korean Educational Development Institute.

Watkins D. A., & Biggs, J. B. (Eds.) (1996). *Chinese learner: Cultural, psychological and contextual influences*. Hong Kong: Comparative Education Research Centre.

Winner, E. (1996). *Gifted children: Myths and realities*. New York, NY: Basic Books.