



Teacher Education Systems of Australia, Singapore, and South Korea: A Case-Oriented Comparative Study

Avustralya, Singapur ve Güney Kore'nin Öğretmen Yetiştirme Sistemleri: Karşılaştırmalı Durum Çalışması

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Abstract

The quality of teachers is one of the critical factors affecting student growth. Besides, researchers found strong relations between performance of teachers and human capital. This critical role of teachers results in placing more importance on teacher education. Through a comparative case-oriented study design, teacher education systems of three countries are aimed to be presented within this paper: South Korea, Australia, and Singapore. The achievements of the students in international exams are very high, and teachers have prestigious statues in those countries. This study aims to describe the education systems, teacher education systems, and professional development of teachers in these three countries and examine the reasons underlying their efficient models and successes.

Keywords: Teacher education, South Korea, Australia, Singapore.

Öz

Öğretmen kalitesi, öğrenci gelişimini etkileyen en kritik etmenlerden biridir. Ayrıca, araştırmalar öğretmen performansı ve insan kaynakları arasında güçlü bir ilişki olduğunu ortaya koymuştur. Öğretmenlerin bu kritik rolü, öğretmen eğitime verilen önemi daha da artırmıştır. Bu çalışmada, karşılaştırmalı durum çalışması deseni ile, Güney Kore, Avustralya ve Singapur ülkelerinin öğretmen yetiştirme sistemlerinin karşılaştırılması amaçlanmıştır. Bu ülkelerdeki öğrencilerin uluslararası sınavlardaki başarıları oldukça yüksek olup öğretmenler prestijli bir statüye sahiptir. Bu nedenle, bu çalışmada bu üç ülkenin eğitim sistemi, öğretmen yetiştirme programları ve öğretmenlerin mesleki gelişimlerini ve de etkili eğitim modelleri ve başarılarının sebeplerini araştırıp tanımlamak amaçlanmaktadır.

Anahtar Kelimeler: Öğretmen yetiştirme, Güney Kore, Avustralya ve Singapur.

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1. Introduction

Education systems include variety of components with different powers (Patrinos, Velez, & Wang, 2013). Students, learning environments, instructional programs, schools, administration, families, educational policies, materials are some of them, however there is a component that has relationship with all the components: the teacher. Thus, training effective teachers with adequate skills, knowledge, and competencies is a serious issue for the quality of education, intellectual, ethical, and social well-being of the community (Guskey, 2002). New set of economic conditions with global competition and educational reforms affected educational policy in the world. Those events resulted with new trends within curriculum, assessment, and teacher education (Saylan, 2013). The quality of teachers is depending on the quality of school and education systems. This issue has been emphasized as follows "The quality of an education system cannot exceed the quality of its teachers" (Barber & Mourshed, 2007, p. 4).

*Bu çalışmanın bir kısmı 2014 EJER Kongresinde sözlü bildiri olarak sunulmuştur.

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Received Date: January 17th, 2018. Acceptance Date: July 15th, 2018.

National education systems have received attention from current research as education systems are affected from national governments. One of the strongest tools to reinforce national strength regards has been education from the beginning of the 19th century, especially from the second half of the 20th century (Ingersoll, et al., 2007). Importance of comparative teacher education provides drawing some lessons from different systems for different purposes and enables to widen the understanding of international, regional or local systems and to see strong and weak points of systems by analyzing differences and similarities. A study providing sound knowledge of foreign and successful examples of systems also would trigger innovative, alternative, and possible energy.

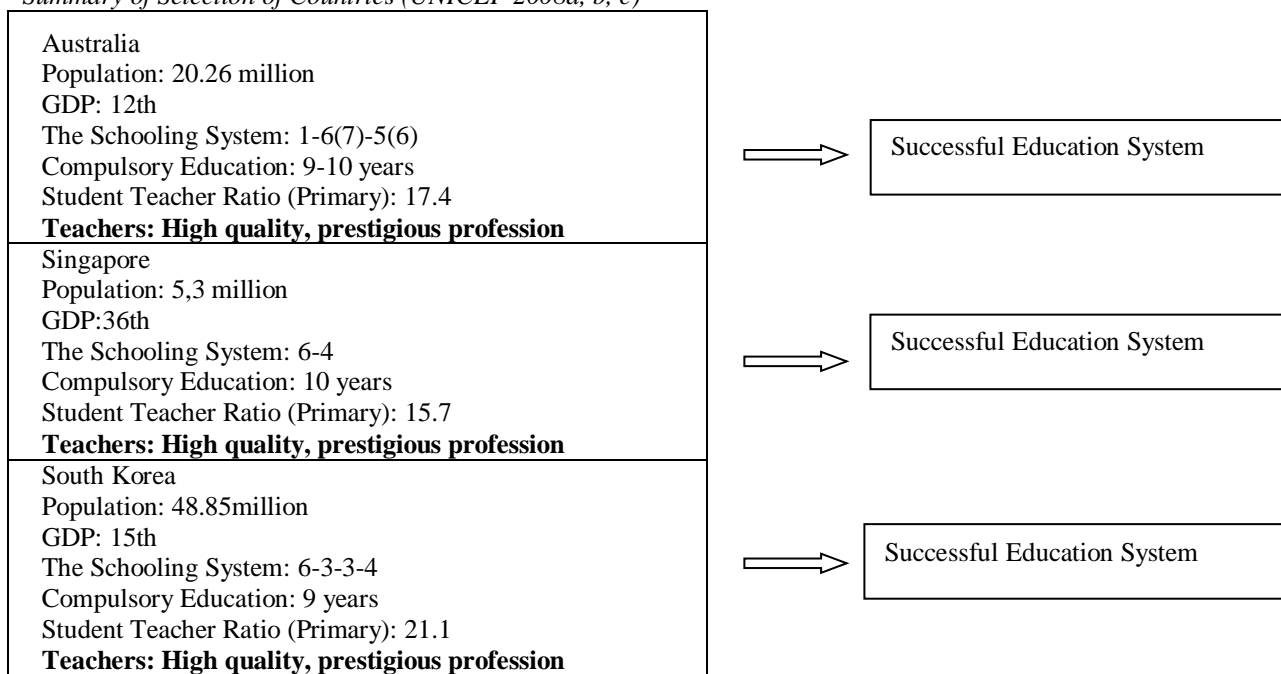
Three countries' teacher education systems are aimed to be included within this study: South Korea, Australia, and Singapore. Those three countries have been in the first ten countries based on the students' achievements in PISA (OECD, 2010), in the first ten countries list that have best education systems in the world (OECD, 2007), and top performing education systems (National Center on Education and the Economy, 2014). This study aims to examine the education systems and teacher education systems of those countries and inform the readers about those successful systems. Besides, the list indicating Government Education Expenditure of various countries in % of GDP (1980-2009) shows South Korea as 69th, Australia as 93th, and Singapore as 145th among 194 countries by Human Development Report of United Nations Report Program. By that way, without investing so much money, the countries are the most successful ones with different education and teacher education systems. This study aims to describe and compare three countries' education systems, teacher education systems, and professional development of teachers in order to seek an understanding of good practice in the training of teachers based on evidence from high performing countries among the world.

2. Method

This is a comparative research with an aim of comparing teacher education systems of three countries (Lor, 2017). This research utilized case-oriented strategy in which a single country or a small number of countries are studied in a systematic way (Lor, 2017). In this study three countries are compared with an insight-generating and in-depth manner in order to understand the complex unities. In case-oriented research the countries are selected appropriate for the purpose of the study. The most different systems design (MDS) was used while selecting countries that are compared within the study (Landman, 2008). In MDS, country selection depends on countries with different characteristics by sharing the phenomenon. The countries listed in Figure 1 differ in respect of their populations, their GDP, and the general schooling system, student teacher ratio, and compulsory education. However, the countries share the phenomenon that is interested in within this study is the "teachers". International books, articles, and reports were used and analyzed to compare the teacher education systems under three components: their education systems, their teacher education systems, and professional development of teachers in those countries.

For this study, three different countries are selected that share the same phenomenon, that is, successful education systems. The countries selected for the study have common indicators for their success. The countries are three of the top ten countries based on student's achievements in PISA (OECD, 2010). The other criterion is that the three countries are in the list of best educational systems in the world (OECD, 2007). Third one is those countries are in the list of top performing countries in terms of their education systems (National Center on Education and the Economy, 2014).

Figure 1
 Summary of Selection of Countries (UNICEF 2008a, b, c)



3. Results

3.1. Education Systems of the Countries

In South Korea, the governmental body responsible for the policies related with education, academic activities, and sciences is Ministry of Education, Science and Technology. Korea’s education system is based on the 6-3-3-4 structure. The types of schools are largely divided into public and private. The main mission of the Ministry of Education is to provide education for all of the citizens without any discrimination regarding abilities and interests of students. Korean education system has a centralized system (Ingersoll, 2007). Compulsory education includes nine years of education, that is, primary and middle school education. Middle school education is the first and compulsory step of secondary education. High school is also called as post-secondary education with different school types. Graduate schools, four-year colleges and universities, and two- or three-year junior colleges are the higher educational institutions in this country (MEST, 2013).

Preschool education is provided by public and private kindergartens for the children of 3 to 5 years of age. Health, society, expression, language, and exploration are the life domains that the curriculum is composed of. To improve the quality of preschool education, the government has developed several types of teaching materials (materials for children’s activities, teachers’ guide, materials for parents’ education, etc.) annually and distributes them freely to kindergartens nationwide (KEDI, 2011).

Primary school education includes six years which are compulsory in South Korea. Addition to given regular curriculum, special emphasis is given for English as a second language to be learnt as a part of the regular curriculum starting in 1997, one to two hours per week from third grade. Native speakers, invited from the United States, Australia, Canada, England, New Zealand, and Ireland, have been assigned to primary, middle and high schools. A total of 1,198 native teachers of English were hired in 2005 alone (KEDI, 2007). Middle school education is compulsory in South Korea. Before 1969 students were supposed to take an exam to continue a middle school. After this date the competitive examination was stopped and graduate students of primary schools are assigned to the school nearest to their respective residences.

High school education is not compulsory in South Korea. There are mainly four types of high schools; general high schools, vocational high schools, science high schools, and specialized high schools. General high schools provide regular high school education. Students learn basic curriculum in the first year of high school, and then they are provided choices to select their classes in the second and third years, regarding with their aptitude, ability and interests. Vocational high schools provide both regular curriculum of high schools to an extent and specialized courses in the fields of agriculture, industry, commerce, fisheries/shipping, and home economics. Recently, the number of students who want to continue for vocational high schools has decreased due to the tendency to maintain their

education in a college or university (KEDI, 2007). Students successful at science are entering for a science high school for the area of state-of-the-art industrialization. Foreign language high schools, art high schools, and physical education high schools are categorized as specialized high schools. Students who want to continue a specialized high school are admitted through a selection process depending on the school type (KEDI, 2007).

In Australia, states and territories have their own curricula and assessment procedures. The states and territories own, operate and regulate around 6 800 schools. Non-government schools (Catholic and independent schools) operate under conditions determined by state and territory government registration authorities. The Catholic system operates approximately 1 700 schools and there are about 1 020 independent schools (Zanderigo, Dowd, & Turner, 2012). School education has slight differences between states and territories but generally it has a similar structure in Australia. Compulsory education includes the ages of 6 and 16 (Year 1 to Year 9 or 10). School education is divided into three areas: “a preparatory year before Year 1: not compulsory but almost universally undertaken; primary education: six/seven years; and secondary education: five/six years” (NUFFIC, 2018).

The government itself and the states and territories share the administration and financing of education in Australia. Consultation between the Australian Government and the states and territories occurs through the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA, 2003). The Australian government provides preschool, preparatory, primary school, secondary school (high school), and senior secondary school (college) education (AEI-NOOSR, 2008). Children between the ages of three and five can take preschool education which is not compulsory. There are both full-day and half-day schools based on the preference of the families (AEI-NOOSR, 2008).

Australian education system includes a year before primary education that is not compulsory and for the preparation of the children for the primary education. The name of this year indicates differences among states such as kindergarten, reception, pre-primary, or transition. The enrolment rate is very high for the preparatory education (AEI-NOOSR, 2008). The education consisting 6 or 7 years is primary school. The emphasis is on developing English language and literacy skills, numeracy and simple mathematics, studies of society, health and creative activities (NUFFIC, 2018; AEI-NOOSR, 2008). Secondary school students, initially, take a general program in the first two years of secondary school. Then, they take elective courses or specific subjects (AEI-NOOSR, 2008).

The mission of Singapore education system is to “mould the future of the nation”, that is to shape the children’s learning process who will lead the future. It values different abilities and needs, and capabilities among individuals and identifies as early as possible the different skills of students and design flexible education programs for those children (Sclafani & Lim, 2008). The governmental body responsible for the education is Ministry of Education (MOE) in Singapore with a holistic and broad-based system. It has a multicultural and multiracial characteristic with a bilingual system. Students have the opportunity to learn their mother tongue language to enable them retain their ethnic identity, culture, and values. The broad-based curriculum enables students to reach their full potential with their individual abilities and develop him/herself for lifelong learning. The broad-based curriculum imparts literacy, numeracy, bilingualism, the sciences, humanities, aesthetics, physical education, civics and moral education and National Education (MOE, 2013).

Singapore general education system comprise six years of primary and four years of secondary education. Nurturing Early Learners – A Curriculum Framework for Kindergartens in Singapore is published by the Ministry of Education for a professional standard in kindergarten curriculum for children aged four to six. Aesthetics and creative expression, discovery of the world, language and literacy, motor skills development, numeracy, and social and emotional development are the areas that are aimed to be improved in preschool (MOE, 2013).

Primary Education consists of a compulsory 4-year foundation stage from Primary 1 to 4 and a 2-year orientation stage from Primary 5 to 6. English language, Mother Tongue and Mathematics are the major areas in primary education. Primary education curriculum comprises both non-academic curriculum that support students to become responsible adults and active citizens, skills-based subjects to develop students’ thinking and their communication skills and make them express themselves clearly and effectively, and content-based subject disciplines such as Languages, Humanities and Arts, Mathematics, and Science. Students completed six years of education are supposed to Primary School Leaving Examination (PSLE) to continue their secondary education (MOE, 2013). The performance of students in Primary School Leaving Examination place students in the Special, Express, Normal (Academic), or Normal (Technical) course.

Students participate in General Certificate Education which determines which pre-universities or post-secondary institutions they have the right to apply for after completing secondary school education. In Singapore there are pre-universities with a two or three year program for students who want to get a university degree after completing pre-university education. Admission to a pre-university program is determined by the LIR5 (first language+5 relevant subjects) scoring system. Pre-university education is the process of being educated in Junior Colleges and Centralized Institutes. There are three types of institutes in Singapore for post-secondary education: Polytechnics, Institutes of Technological Education (ITEs), and Universities. In order to continue their education directly students go to

Polytechnics and ITEs, students who want to go to the universities have to complete their pre-university education (MOE, 2013; Ingersoll, et al., 2007).

Table 1
Summary of Comparison of Countries: Educational Statistics (UNICEF, 2008).

	Australia	Singapore	South Korea
<i>Official school age</i>			
<i>Preschool</i>	4	3	5
<i>Primary school</i>	5	6	6
<i>Secondary school</i>	12	12	12
<i>Gross enrolment ratio (%)</i>			
<i>Preschool</i>	104.0	50.5	95.5
<i>Primary school</i>	104.1	77.9	104.5
<i>Secondary school</i>	148.5	63.2	95.6
<i>Public expenditure on education</i>	4.6	3.7	4.6
<i>As % of GDP</i>			

3.2. Teacher Education Systems of the Countries

Teacher education in South Korea is offered by universities of education, colleges of education, departments of education or teacher's certificate programs in colleges and universities, junior colleges, the Korea National Open University (broadcast and correspondence university), and graduate schools of education. The 11 national universities of education, one private university (Ewha Woman's University), and Open University train elementary school teachers. There are also Universities of Education established for elementary teacher training. There are also different institutions training secondary school teachers (Center on International Education Benchmarking, 2014).

Teacher candidates must pass a 3-stage process examination to be employed as a teacher in a national or public school in South Korea. The first stage includes a multiple-choice test. The ones who are successful at this written test are going through the second stage, that is, essay type written test. Applicant selection is finalized with the last stage including an interview. The aims of interview question are consisting of aptitude for teaching, evaluation of teaching capability, and practical skill/experiment. This here stage process has been implemented since 2009 to select high quality teachers.

The governmental body for teachers in Australia is Teaching Australia-the Australian Institute for Teaching and School Leadership. Registration of teachers is the responsibility of the states and territories. Each of them determines the conditions for teacher employment and qualification requirements. Selection for teacher education in Australia is based on year 12 results, or first-degree results, in the case of graduate entry programs (Bayram, 2010). Teacher education is provided by universities and private colleges in Australia. In most of the states or regions teacher education programs include a four-year education. The programs include theoretical courses for pedagogical development, content knowledge, and practical education lasting from 12 to 20 weeks. All of the programs have the requirement to include information and communication technologies, education for children with special needs, and awareness studies for different cultures and native Australians (Bayram, 2010).

States in Australia have different implementations and regulations for teacher training and qualifications of teachers. There are three different ways for education of elementary and secondary school teachers. One of them is a four-year undergraduate teacher education degree (Bachelor of Education), the second one is a four-year double-degree program that is a concurrent degree with one of the two subjects being teacher education (Bachelor of Science or Bachelor of Arts with Bachelor of Teaching), and the last way is a three or four-year academic degree (Bachelor of Science or Bachelor of Arts), followed by a postgraduate teacher training course (Rodrigues, 2005).

The interrelated processes pertaining to recruitment, training, certification, appointment, and deployment of teachers for the Singapore schools are the sole responsibility of the Ministry of Education with relation with National Institute of Education (NIE). Some of the objectives of NIE include providing academic programs, promoting research, and providing professional development. (NIE, 2013).

The Institute offers a variety of programs for different qualifications from diplomas to bachelor degrees to postgraduate degrees. They aim to provide rigorous university education and to produce graduates with the skills to teach in schools. The Institute also organizes leadership programs for in-service teachers who may assume leadership positions (NIE, 2013). To become a teacher, it is needed to have a bachelor, undergraduate, or college degree in teaching subjects. The admission criteria for non-graduate teachers (i.e., those without any university degree) can include Ordinary Level of General Certificate of Education, Advanced Level of General Certificate of Education or Polytechnic diploma After getting one of those degrees candidates go into an interview process to be evaluated in terms of passion for teaching, communication skills, creativeness and innovativeness, confidence, leadership qualities, and good role model (Ingrossoll, 2007).

In 2005, there were 26,382 teachers (excluding vice principals and principals) comprising 18,620 graduates (70.6%) and 7,762 non-graduates (29.4%). The majority (55.1%) of graduate teachers (N = 10,262) were appointed to secondary schools, while 5,827 graduate teachers (31.3%) are in primary schools (Ingrossoll, 2007).

Table 2

Summary of Comparison of Countries: Teacher Quality Components (CIEB, 2014; NIE, 2013; Bayram, 2012)

	<i>Australia</i>	<i>Singapore</i>	<i>South Korea</i>
<i>Recruitment and Compensation</i>	<ul style="list-style-type: none"> • Each school system has its own processes • Recruiting high quality teachers emphasized by Department of Education, Employment and Workplace Relations (DEEWR) • Teacher life cycle was identified (attract, train, place, develop, retain) • Improving the collaboration between teachers and researchers 	<ul style="list-style-type: none"> • Teachers must commit to three full years on the job after training • Teachers compensation depends on their career ladders 	<ul style="list-style-type: none"> • Several types of institutions for teacher education • Teachers are hired centrally based on their scores on competitive examination
<i>Initial Education and Training</i>	<ul style="list-style-type: none"> • All teachers must hold a bachelor's degree • Multiple degree paths for teaching • National framework for professional teaching standards • All teachers enter and induction process after completing their formal education to become full members of the profession 	<ul style="list-style-type: none"> • All teachers are trained at the National Institute of Education • Pre-service teachers receive a salary during their training • The programs at NIE are focused on pedagogy and connections between educational subjects, rather than advanced academic training 	<ul style="list-style-type: none"> • Teachers are trained in colleges, universities, and teacher's colleges • Four years of coursework • Curriculum including subject-area content and pedagogical theory • Teachers receive in-school pre-employment training and post-employment training
<i>Career Ladders</i>	<ul style="list-style-type: none"> • Teachers can have roles on department head, leadership roles in schools, local school administration, and educational researcher. • Teachers have an opportunity to move related professions such as counselor or special education teacher through professional development 	<ul style="list-style-type: none"> • Three directions for teaching career: The teaching track, to become Principle Master Teachers; The leadership track, to be promoted from a leadership position; The specialist track, to become chief specialist to focus on research and teaching policy • Each track requires additional training 	<ul style="list-style-type: none"> • Teachers can have roles on department head, leadership roles in schools, local school administration, and educational researcher.

3.3. Professional Development of Teachers

In South Korea, teachers are offered “training for newly employed teachers, qualifying training programs for acquiring higher status or special certificate (counselor and such), and the performance development training programs designed to promote professionalism” in terms of in service teacher education (Kim & Han, 2002, p.58). Newly employed teachers are supposed take in-service training in order to adapt themselves to the school setting. There are three phases for those teachers; pre-employment training, post-employment training, and harvest training. Pre-employment phase includes two weeks of training on student guidance, classroom management skills, and developing the basic capacity of the teacher. Practical tasks are been emphasized on during this two weeks period. Post-employment phase lasts for six months training on “instructional guidance and evaluation, classroom supervision and life guidance, student’s specialty and aptitude guidance, and supervision of clerical work” (Kim & Han, 2002, p. 58). It is directed by the principle, vice principle, and advisor teachers with the aim of enhancing abilities and adaptability of the teachers. The harvest training consists of the phases of summarizing and concluding the two weeks of training through case stories, discussion groups, and written reports (Kim & Han, 2002).

Professional development programs are provided for in-service teachers for attaining higher or specific qualifications (counselors, etc.) and job training for professional development. Qualification training programs are also offered for teachers that leads to rise in salary class. Teachers who want to attain higher qualification or promotion to managerial position has to complete qualification training program (Kim & Han, 2002).

In Australia, it is believed that teacher candidates need for basic teacher education, practice teaching experience, and continuing professional education for systematic and consistent development. If teachers are to be continued to their professional development, they can be more effective on improving skills of students and response for different learning needs of students. Australian Institute of Teaching and School Leadership (AITSL) is financed by the government to improve the quality of teaching profession. It has collaboration with teachers, school administrators, and academicians (Overview Teacher Education, 2008).

There are different approaches in terms of policies and implementations on professional development of teachers in Australia. Quality Teacher Program supports trainings of teachers. Teachers are encouraged for sustainable education and to be collaborative with other teachers. There are some professional development implementations in some states for the encouragement to the process. For instance, in Queensland, Queensland Consortium for Professional Development in Education has prepared a document including sample cases for professional developments of teachers (QCPDE, 2002).

There are variety of trainings for professional development of teachers in Singapore. National Institute of Education or Ministry of Education provides courses, conferences, forums, and seminars for teachers. These programs range from in-service training to online classes on many teaching subjects. Teachers can participate in 100 hours of professional development per year. There are school staff developers responsible for knowing the problem areas in school and they organize school-based trainings such as a group’s math performance, or to introduce new practices such as project-based learning or new uses of ICT. Each school have fund for professional development of teachers (Ingersoll, 2007).

Table 3

Summary of Comparison of Countries: Professional Development of Teachers (Kim & Han, 2002; CIEB, 2014; NIE, 2013; Bayram, 2010)

Professional Development of Teachers

<i>Australia</i>	<ul style="list-style-type: none"> ● Each state has its own developed professional development standards and programs ● The Australian Institute for Teaching and School Leadership is currently developing National Professional Standards for Teachers
<i>Singapore</i>	<ul style="list-style-type: none"> ● Teachers are provided several types of professional development activities. National Institute of Education provide courses, conferences, and seminars and opportunity to study graduate degree programs
<i>South Korea</i>	<ul style="list-style-type: none"> ● Government develops training for qualifications, in-service trainings, and special trainings. Teachers have a chance of being promoted by completing credit hours of trainings. Principles can provide trainings on particular topics depending on the needs of teachers with scholarships.

4. Discussion and Conclusion

Teaching in Australia, Singapore, and South Korea is a prestigious work. But the reason behind this prestige lies under the "teachers" themselves. Being successful to be a teacher is a common issue among those countries. To be a teacher is not an easy pathway. The respect that teachers should have is obvious in three countries. Especially in Singapore and South Korea candidates are supposed to complete multiple ways to start teaching. In Australia teachers are selected from a centralized exam but recent position statements emphasize on the need for new criteria for teacher selection.

Being a teacher is an attractive profession in South Korea. There is a traditional respect for teachers in the country. Teachers have a guaranteed employment status and strong professional rights and also they are accepted as role models for the society. The teacher salaries is also accepted as higher when it was compared with that of other OECD member countries (OECD, 2008). Especially, the salary level of teachers at the top level is remarkably high, because teacher salary increases in line with teachers' years of service and it takes 37 years of service to reach the top salary level. Such a long period also contributes to preventing teachers from leaving the profession, which is verified by very low turnover rate of teachers. In Singapore, salaries of teachers are similar with other professions. The maximum salary a lower-level teacher earns is twice as much as the per capita GDP. Also, successful teachers are provided an opportunity to increase their salaries (Asia Society, 2007).

Teachers face with some difficult working conditions due to the huge number of students in South Korea. The number of students per teacher is high when compared to other countries. Workload of teachers can be tired and also affecting the quality of the lessons and learning opportunities of students. In addition, the workload of elementary teachers is higher as there are no subject teaching in this level. Secondary school teachers' workload is better as they only teach their major subjects (Kim, 2001). The ICT infrastructure in classrooms is well-designed in South Korean schools. All primary and secondary school classrooms have internet access and ICT infrastructure in terms of computer since 2002. (Kim & Han, 2002).

In Australia, being a teacher had a prestigious history among society, however, due to some shifts there is a decline in the status of teachers in Australia. The ageing of the teacher workforce, increase in student enrolments, decline in the attractiveness of teaching as a career, lack of teachers in key learning areas are accepted as the factors negatively influencing the status of the teachers (OECD, 2001; OECD, 2012).

Teachers are recruited from the first three quarters of their graduates in Singapore, so successful students become teachers. A teacher is considered one of eight applicants for admission to the training program. It is a very respectable profession teaching in Singapore with the philosophy that teaching is difficult and the belief that the teachers of Singapore are the creators of students who are one of the world's greatest achievements (Goh and Chank, 2002).

South Korea teacher training institutions face with some difficulties in which one of them is the insufficiency of teaching staff, facilities, and instructional materials. The number of students is much more than the existing staff, facilities, and materials in teacher training programs. Especially, for subject teaching programs more academicians are needed. The number of teacher candidates in a college or a university per an academician exceed the appropriate class size that affect the quality of the courses and general program (Kim & Han, 2002; OECD, 2008).

Teacher training is provided by different institutions including different curriculums and implementations. This issue is seen as risky for the quality of professionalism and teaching. Reorganizing curriculum of the teacher education institutions; adopting an accreditation system of the teacher education institutions; upgrading the training institutions to the level of graduate school; abolishing the teacher training function of graduate school of education; and overall integration of the departments in colleges of education are some of the ways to be explored in the country for a standardized teacher quality (Kim & Han, 2002).

The content and pedagogy of teacher education is an important component of reaching success in teaching. This is also one of the most difficult aspects while constructing a program (Darling-Hammond, 2006). A clear vision of good teaching, sustainable and meaningful standards of practice, a practice-based curriculum with clinical experiences, use different and explicit methods of teaching, strong relationship with practitioners are defined as the features of a well-prepared teacher education program (Darling-Hammond, 2006). Especially the clinical experiences provided in a teacher education program with the direct supervision of teachers and expert modeling of practice are important for teacher candidates to internalize theory and apply what they have learnt (Ball & Cohen, 1999; Baumgartner, Koerner, & Rust, 2002).

Three countries' investment on education is below or average the OECD countries. That brings the differentiation of quality versus quantity. Spending so much money does not have a guarantee of being successful. The how of the usage of this money explains one of the answers of their success. Especially, the investment on professional development of teachers is obvious among those countries. The key word behind the success of Australia, Singapore, and South Korea is the sustainable professional development. The countries give special importance for professional development of teachers. At this point an issue that should be noted is about the quality of professional development. The variety of

methods and strategies, collective and collaborative learning activities, experiencing research with other teachers during professional development affects the quality of it (OECD, 2013). TALIS 2013 results indicated that both of those three countries include different methods and gave importance to collective activities in their professional development procedures. “Teacher participation in high-quality professional development is systematically associated with a more intense use of some of the classroom practices that are key to student learning.” (TALIS, 2017, p.2).

The collaboration between the practice and research; the center of the research and the center of implementation is an important component for the quality of the teaching and education systems (Darling-Hammond, 2006; Tseng, 2012). This issue is also discussed in professional development literature that the traditional separation between researchers and teachers should be changed (Avalos, 2011). Singapore is a critical example that achieved this issue with important indicators of their successful system. In Singapore there is an effective relationship between associations related with which explains their immediate achievement. Ministry of Education (MOE), National Institute for Education (NIE), and schools’ implementations indicate a consistency between each other. The Ministry of Education is the body for policy development and the institute is responsible for research and pre-service training of teachers. The research conducted by the NIE is used to develop policies by MOE. The academicians in NIE are usually invited to the MOE and be involved in discussions and meetings. This situation is also accepted as one of the reasons for the success of Singapore in education (OECD, 2010). In Australia, also, there is a collaboration between universities and schools. Universities prepare modules for teachers that can be taken separately or can be integrated in another program or for university degree (Lieberman, 2000). In Victoria, Professional Development Certificate provides teacher to take modules with 15-18 hours in universities. Teachers who are successful after the education can be promoted by this certificate. In addition, some schools organize “School Improvement Days” and these programs may involve some training on professional development of teachers.

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