PERCEPTIONS OF KOREAN PRE-SERVICE SPECIAL EDUCATORS REGARDING TEACHING COMPETENCIES FOR STUDENTS WITH DISABILITIES

Yu-Ri Kim
Jiyeon Park
Suk-Hyang Lee
Ewha Womans University

The purpose of this study is to develop a Teaching competency index in special education *and to investigate Korean pre-service special educators (PSSEs)' perceptions regarding each item of the index. Based on a review of the literature on exemplary instruction in special education, we developed an index composed of 44 items. The six sub-domains of the index include 'Organizing content', 'Writing lesson plans', 'Considering individual characteristics', 'Encouraging student participation', 'Enhancing interactions', 'Practicing effective teaching strategies' and 'Reflecting on one's own teaching'. The survey participants included 37 PSSEs who just completed their practicum in special schools in Korea for four weeks. Results showed that there was a significant difference between the importance and implementation of the teaching competencies both in the total score and in the subtotal score of each domain. No significant difference was found across three certification areas (early childhood, elementary, and secondary) of PSSEs and across the disability types of the students who attend the practicum sites. Finally, discussions of the results and the implications of this study for personnel preparation practices in Korea are provided.*

According to the *2013 Special Education Annual Report* written by the Ministry of Education (2013) of the Republic of Korea, 86,633 students with special needs are provided with special education and related services in special schools and resource rooms located in general schools. About 17,500 certified special educators are in charge of the education of these students, which means that the approximate student-teacher ratio is 5:1. In Korea, there are three different types of special educator certifications (*i.e.*, early childhood, elementary, and secondary) based on the school level of the students that the special educators are taking care of. As of September 2013, a total of 37 universities (6 national universities and 31 private universities) have established personnel preparation programs (PPPs) for special education professionals and a total of 1,558 undergraduate students are enrolled in the programs at these 37 universities. In Korea, there are two ways to become certified as a special educator. One (and the most common) way is to graduate from a university with a major in special education. The other way is to enter a graduate school that established special educator preparation programs; however in this case, the applicant must have a teacher's certificate in other subject areas (*e.g.*, social studies or general elementary education). Those who complete their bachelor's or master's degree in a special educator preparation program have to pass the national teacher examination to work at public special schools or public inclusive schools. Other graduates work at private schools, welfare centers for persons with disabilities, inclusive or special preschools, and private clinics, through agency-wide hiring procedures.

The number of credit hours for a special educator certificate is 102. As shown in Table 1, students have to take 21 credit hours in core special education courses, 21 credit hours in elective special education courses, and 38 credit hours in their certificate areas such as early childhood, elementary, and secondary (Ministry of Education, 2014). In addition to these 80 credit hours, all students who want to become certified as any type of teacher have to take 22 credit hours in required courses including two-credit hour practicum.

Most special education courses require students to spend some time in various special education settings as a part of course assignments, but the most intensive field training for PSSEs is a four-week practicum.

Although inclusive education in Korea has expanded tremendously during the last four decades and, as a result, about 70% of the students with special needs are educated in inclusive settings (Ministry of Education, 2013), this does not mean that the significance of special schools where only students with disabilities attend is diminished. As of 2014, there are 163 special schools in Korea and approximately 30% of students with special needs attend these schools. Approximately 43% of the certified Korean special educators are working at special schools. Therefore, special schools where a considerable number of special educators and students with special needs are concentrated in one place have been utilized as practicum sites by most universities that have PPPs for special educators.

Table 1. Structure of Courses Required for Special Educator Certificate

	Core SPED[a] courses	Elective SPED courses	GED[b] courses in each certificate area	Required courses
Description	Basics of special education	Specific themes in special education (*e.g.*, transition, and family support)	Courses based on the school levels (*e.g.*, early intervention, elementary math, Chinese history)	Courses required to all pre-service educators (*e.g.*, practicum, introduction to education)
Number of credit hours	21 (taking 7 courses among 15 core courses)	21	38	22

Note. [a]SPED: special education. [b]GED: general education. [c]Introduction to Special Education, Special School Curriculum Development, Inclusive Education for Students with Disabilities, Assessment and Evaluation of Children with Disabilities, Special Education Technology, Instruction of Students with Visual Impairments, Instruction of Students with Hearing Impairments, Instruction of Students with Intellectual Disabilities, Instruction of Students with Physical Disabilities, Instruction of Students with Multiple and Severe Disabilities, Instruction of Students with Emotional/Behavioral Disorders, Instruction of Students with Autism, Instruction of Students with Communication Disorders, Instruction of Students with Learning Disabilities, Instruction of Students with Health Impairments

As attention has been given to the issue of *how to prepare highly qualified special educators who will meet the essential needs of the real-educational field*, much emphasis is placed on the importance of a practicum as an opportunity for developing the teaching competencies of PSSEs (Kim, Park, Lee, & Yoo, 2007). Kim *et al.* , (1997) conducted a survey of 176 undergraduate students who completed a special education practicum to find out to what extent these students were satisfied with their own preparedness for the practicum. The responses were quite negative. PSSEs were found to perceive that what they have learned before the practicum was far from sufficient in performing the practicum, which indicates the need to intensify classroom management capacities including teaching competency in PPPs for special educators in Korea. The role of the practicum is two-fold. On one hand, the practicum in itself is a part of the personnel preparation curriculum. On the other hand, the practicum is a chance to verify whether the personnel preparation curriculum makes a difference in the teaching competency of PSSEs.

Teaching competency is one of the most critical components for highly qualified teachers. Therefore, it is essential that the PPPs for special educators provide opportunities for PSSEs to reflect upon the meaning of effective teaching and to learn and realize pedagogical knowledge and skills. Discussions on teaching competency in special education began relatively recently in Korea (Baek, 2011; Han, 2013; Lee *et al.*, 2012; Nah & Seo, 2012; Oh, 2011; Park, 2011). This increasing interest in the *quality* of instruction seems to be a natural consequence of rapid quantitative improvement in Korean special education. Recently, two studies have been conducted regarding perceptions of PSSEs in Korea. Oh (2011) conducted a survey composed of three open-ended questions (*i.e.*, [a] desirable teaching practices in special education, [b] undesirable teaching practices in special education, and [c] the elements that should be added to the current PPPs for special educators to cultivate teaching competencies). From a content analysis of the responses, Oh (2011) found that the participants regarded *individualization based on unique characteristics of each student, encouraging students' participation, and utilizing various learning materials* as the most important factors when judging desirable or undesirable teaching practices. She also found that the most frequent suggestion of the participants regarding the elements to be added to the PPPs was provision of opportunities to accumulate practical knowledge and experiences in a variety of special education settings during their college years. In addition, Baek (2011) carried out focus group interviews with pre-service early childhood special education (ECSE) teachers after they completed a four-week practicum in order to discover their perceptions regarding quality instruction and their suggestions for the PPPs. From a qualitative analysis of the interview transcripts, it was found that

the characteristics of good instruction emphasized by the participants were (a) a functional and developmentally appropriate curriculum, (b) play-based, child-initiated, responsive, and individualized instruction, and (c) effective utilization of multimedia and natural environments. The participants also indicated that the current curriculum would need to be strengthened so that the pre-service ECSE teachers are equipped with more practical skills required in the field. These two studies laid the foundation of the present study in that the researchers asked PSSEs who completed a four-week practicum about their perceptions of instructional expertise and the ways to foster the expertise.

It is not an exaggeration to say that the practicum is the most intensive and the last opportunity for PSSEs to learn, practice, and reflect on their teaching competencies before they enter the real field. The PSSEs are entitled to observe students with disabilities, design individualized intervention, and practice classroom management under the supervision of veteran teachers, all of which are very precious experiences that cannot be obtained in other ways. In this sense, these PSSEs could be the richest informants for providing some clues about how to improve the PPPs for special educators. In this study, we developed a *Teaching competency index in special education* based on a review of the literature on exemplary instruction in special education and investigated the PSSEs' perceptions regarding each item of the index, especially in terms of the degree of importance and implementation. We assumed that the PSSEs' perceptions of the importance and implementation and the gap between the two would provide useful information and insights about ways to enhance teaching competencies before the PSSEs enter the real field. The research questions of this study are as follows. (1) Is there a significant difference between the degree of importance and implementation regarding teaching competencies perceived by PSSEs? (2) Is there a significant difference in importance and implementation across three certification areas (early childhood, elementary, and secondary) and across the disability types of the students who attend the practicum sites?

Methods

Participants

The participants of this study were 37 PSSEs attending a university located in Seoul, Korea. The survey was distributed to the participants after they completed a four-week practicum which was one of the requirements for the special education certificate. The practicum sites were special schools located in Seoul and Kyung-gi-do. These special schools were places where only students with specific disability types attended. The average age of the participants was 22.3-years-old (*SD* = .19). The certificate areas of the participants and the disability types of the students who attend their practicum sites are presented in Table 2.

Table 2. Respondent Demographics (N = 37)

Variable	n	%
Certification areas	Early Childhood Special Ed.	10
	Elementary Special Ed.	13
	Secondary Special Ed.	14
Disability type of registered students (practicum sites)	Intellectual disability	10
	Physical disability	5
	Autism	16
	Visual impairment	4
	Hearing impairment	1
	Others	1

Measures

A survey for this study was developed in three stages.

First, a review of the literature was conducted in order to come up with a basic framework and list of items. An electronic database search using ERIC, PsychInfo, and Riss4U (Korean database) was conducted. The search focused on the studies published between 2000 and 2014. A combination of the following keywords was used for the search: disabilit*, special education, competenc*, student-teacher*, practicum*, pre-service, and teacher program. Consequently, 32 Korean articles and 44 English articles

were identified.

Table 3. Structure of the Survey

Section		Content
Demographic information (7 items)		age, grade, certificate area, program types for practicum, disability type of registered students, teaching experience of practicum supervisor, students' field experiences prior to practicum
Teaching competency (44 items)[a]	Organizing content	Ability to organize content based on students' characteristics and generalization when planning lessons
	Writing lesson plans	Ability to consider students' individual learning objectives, and to include key content and learning activities when developing lesson plans
	Considering individual characteristics	Ability to use instructional methods and strategies appropriate to students' individual characteristics and diverse characteristics
	Encouraging student participation	Ability to encourage student participation and provide a variety of opportunities for participation
	Enhancing interactions	Ability to enhance interactions between a teacher and students, and between students
	Practicing effective teaching strategies	Ability to practice a variety of teaching strategies to enhance students' attention and learning
	Reflecting on ones' own teaching	Ability to reflect on ones' own teaching as a special educator

Note. [a]See Appendix 1

Second, a draft of the *Teaching competency index in special education* was developed based on a review of the literature on exemplary instruction in special education (Allinder, 2001; Baek, 2011; Conderman & Johnston-Rodriguez, 2009; Cooley-Nichols, 2004; Dingle, Falvey, Givner, & Haager, 2004; Dymond, 2008; 2013; Han, 2013; Lee *et al.*, 2012; Macy & Squires, 2009; McHatton & Daniel, 2008; Nah, 2012; Nonis, 2011; Oh, 2011; Park, 2011; Richards, Hunley, Weaver, & Landers, 2003; Rust 2010). The draft included 49 items regarding instructional content, instructional methods (*e.g.*, writing lesson plans, teaching strategies, and interaction), and instructional environments. The authors removed or revised any items that were unclear or failed to gather the intended information, which resulted in a 41-item index. Additionally, seven demographic questions were written.

Third, the content validity was tested by one elementary special educator with five years of teaching experience and one secondary special educator with 15 years of teaching experience. They provided intensive feedback on the clarity of items and the comprehensiveness of the index. Based on their feedback, some items were separated into two items and two or three similar items were compiled into one item. Through this process, the survey revision was completed, resulting in an index composed of

seven demographic questions and 44 teaching competency questions.

Finally, a pilot test of the draft survey was conducted. Two PSSEs who completed their practicum in the previous year participated in the pilot study. They were asked to review the clarity of the items and the ease of the survey format. Based on their feedback, minor adjustments were made to the index.

The survey was divided into two sections. The first section requested demographic information, including seven items. The second section composed of 44 items requested information on PSSEs' perceptions of the importance and implementation of teaching competencies. The PSSEs rated each item on a five-point Likert-type scale ranging from 1 (not at all) to 5 (most important) regarding the degree of importance and a corresponding five-point Likert-type scale ranging from 1 (not at all) to 5 (most successful) regarding the degree of implementation. Table 3 provides a summary of the survey.

Procedures and Data Analysis

Envelopes containing a survey and a small gift were distributed in person to 37 PSSEs within two weeks of completion of their practicum. It took approximately 15 minutes to complete the survey. The surveys were received from all of them within one week, indicating a 100% response rate.

The data collected were analyzed by SPSS 21 software. A Cronbach's alpha reliability measure resulted in an overall measure of .94, with the importance scale at .94 and the implementation scale at .94. Cronbach's alpha coefficients for seven sub-domains of teaching competencies ranged from .56 to .88 for the degree of importance and ranged from .54 to .87 for the degree of implementation. Mean and standard deviations were calculated for rating of the importance and the implementation. A paired *t*-test was performed to determine whether there was a difference between the importance and implementation perceived by PSSEs. Furthermore, one-way analysis of variance (ANOVA) was performed to determine whether there was a significant difference in the importance and implementation across three certification areas (early childhood, elementary, and secondary) of PSSEs and across the disability types of the students who attend the practicum sites.

Table 4. Differences between the Importance and Implementation (N = 37)

	Importance *M* (*SD*)	Implementation *M* (*SD*)	*t*
Total	4.60 (.31)	3.72 (.53)	10.56***
Organizing content	4.67 (.29)	3.60 (.45)	13.20***
Writing lesson plans	4.31 (.54)	3.96 (.55)	5.20***
Considering individual characteristics	4.74 (.35)	3.78 (.72)	8.21***
Encouraging student participation	4.85 (.23)	4.08 (.64)	7.52***
Enhancing interactions	4.72 (.33)	3.69 (.73)	9.12***
Practicing effective teaching strategies	4.51 (.42)	3.54 (.72)	8.39***
Reflecting on one's own teaching	4.61 (.49)	3.80 (.82)	6.37***

***$p < .001$Tables 5 and 6 provide a summary of the five highest mean ratings and five lowest mean ratings in both the importance and the implementation of teaching competencies.

Results

Differences between the Importance and Implementation of Teaching Competencies

A comparison of the mean ratings of the two scales were made using the paired t-test to determine if a difference existed between the importance and the implementation that PSSEs perceived regarding

teaching competencies. The mean ratings of the importance and implementation were 4.60 (*SD* = .31) and 3.72 (*SD* = .53), respectively. The difference between the importance and the implementation was statistically significant ($t = 10.56$, $p < .001$). This indicates that the PSSEs rated the perceived degree of importance of teaching competencies higher than that of implementation. In addition, the mean ratings of the perceived importance for every sub-domain were higher than those of implementation. The differences between the importance and the implementation for every sub-domain were statistically significant. The means and standard deviations, and the results of the paired *t*-test are presented in Table 4.

The PSSEs awarded their highest importance ratings to item 1: *Take the present level of each student into account when planning lessons* (*M* = 4.97, *SD* = .03). Among the five highest ratings, three items (items 17, 18, and 21) were all related to the strategies for 'Enhancing student participation' and item 4 (Paying attention to the students' interests when planning lessons) was also related to student participation. This indicates that the PSSEs put a special emphasis on student participation. Although they placed higher importance ratings on teaching competencies related to considering students' present level during lesson planning, the skills under the sub-domains of both 'Considering individual characteristics' and 'Enhancing interactions' were not included in the five highest rated items.

Table 5. Five Highest Rating Items

Importance	*M*	*SD*	Implementation	*M*	*SD*
1	1. Take the present level of each student into account when planning lessons.	4.97	.03	8. Differentiate the lesson objectives based on the present level of each student when writing lesson plans.	4.43
2	17. Motivate students to learn during class.	4.92	.05	17. Motivate students to learn during class.	4.30
	18. Encourage students to participate actively in class.	4.92	.05		
3				19. Provide students with opportunities for choices during class.	4.24
4	4. Pay attention to the students' interests when planning lessons.	4.86	.06	4. Pay attention to the students' interests when planning lessons.	4.22
5	21. Use appropriate prompts to encourage students' participation and performance.	4.84	.06	29. Review the previous class lesson briefly.	4.19
				10. Include core content when organizing the activities in lesson plans.	4.19

On the other hand, item 9 (including every necessary component in lesson plans) was given the lowest importance rating (*M* = 3.78, *SD* = .14). The participants also perceived item 12 (Considering connection with other subject areas when planning lessons) as less important. This indicates that they perceived items under the sub-domain of 'Writing lesson plans' as relatively less important.

With regard to the degree of implemention, the PSSEs awarded their highest ratings to item 8: *Differentiated the lesson objectives based on the present level of each student when writing lesson plans* (M = 4.33, SD = .13) Item 10 under the sub-domain of *Writing lesson* plans also received high ratings. This indicates that although they perceived the skills related to *Writing lesson plans* as less important, they successfully implemented the skills. Items 17 and 4 were included in the five highest rated items regarding the degree of the importance and that of the implementation. Additionally, item 19 under the sub-domain of *Encouraging student participation* was included in the five highest rated items. The findings indicate that the PSSEs perceived student participation as important and made efforts to enhance student participation. However, although item 8 (Differentiating the lesson objectives based on the present level of each student when writing lesson plans) received the highest implementation ratings, the items under the sub-domains of *Considering individual characteristics* and *Enhancing interactions* were not included in the five highest ranking items. This suggests that the participants perceived the skills under the two sub-domains as relatively less important and implemented them relatively less successfully.

The PSSEs awarded their lowest importance ratings to item 2: *Take the goals and their objectives in the IEP of each student into account when planning lessons* (*M* = 2.73, *SD* = .20). Item 44 (Monitoring whether knowledge and theory learned at a university were applied in the process from lesson preparation to the actual lesson in class) received low mean ratings in both the degree of the importance and that of the implementation. This indicates that they were less likely to perceive the importance of reflective teaching and were also less likely to examine and evaluate their teaching.

Table 6. Five Lowest Rating Items

	Importance	*M*	*SD*		Implementation	*M*	*SD*
	9. Make sure that everynecessary component is included in lessonplans.	3.78	.14		2. Take the goals and their objectives in the IEP[a] of each student intoaccount when planninglessons.	2.73	
2	12. Consider the connection with other subject areas when writing lesson plans.	4.11	.13		32. Plan transition time to naturally transit between activities duing class.	2.86	
3	44. Monitor whetherknowledge and theory learned at a university were applied in the process from lesson preparation to actual lesson in class.	4.14	.14		40. Evaluate whether all of students who participated in class met their own learning goals.	3.00	
4	5. Include the activities that can enhance basic academic skills (*e.g.,* reading, writing, speaking, listening, and math) when planning lessons.	4.19	.13		44. Monitor whetherknowledge and theorylearned at a university were applied in the process from lesson preparation to actual lesson in class.	3.06	
5	30. Walk around classroom instead ofstanding at one site during class.	4.22	.15		28. Use a variety of instructional forms (*e.g.*, one-to-one instruction, small group instruction, large group instruction, etc.) considering students' characteristics and lesson content.	3.16	

Note. [a]Individualized Education Program

Differences in the Importance and Implementation of Teaching Competencies

Table 7 indicates the differences among the responses of early childhood, elementary, and secondary

PSSEs in the perceived importance and implementation. The early childhood PSSEs (M = 4.70) rated the teaching competencies as more important than elementary (M = 4.68) and secondary PSSEs (M = 4.44). However, there was no significant difference among the three groups (F= 2.95, p > .05).

Table 7. Differences in the Importance and Implementation across Certification Areas

	Early childhood SPED (n=10)	Elementary SPED (n=13)	Secondary SPED (n=14)	F
	M (SD)	*M (SD)*	*M (SD)*	
Importance	4.70 (.22)	4.68 (.23)	4.44 (.39)	2.95
Implementation	3.78 (.34)	3.83 (.49)	3.59 (.66)	.79
Difference between importance and implementation	.91 (.38)	.85 (.37)	.86 (.69)	.05

With regard to the degree of implementation, elementary PSSEs (M = 3.83) implemented the teaching competency items more successfully than early childhood (M = 3.78) and secondary PSSEs (M = 3.95). However, there was no significant difference among the three groups (F=.79, p > .05).

The three groups all rated the degree of importance of the teaching competencies higher than that of implementation. In particular, the mean differences of the scores between the importance and implementation were .91, .85, and .86 for early childhood, elementary, and secondary PSSEs, respectively. However, the differences were not statistically significant (F = .05, p > .05).

Table 8 indicates the differences among the responses of PSSEs who completed their practicum in special schools for intellectual disability, autism, and others. As noted in Table 8, PSSEs who completed their practicum in special schools for others (M = 4.63) rated the teaching competencies as more important than those who completed the practicum in the schools for autism (M = 4.61) and intellectual disability (M = 4.54). However, there was no significant difference among the three groups (F= .23, p >.05).

Table 8. Differences in the Importance and Implementation across Disability Types of the Students Who Attend the Practicum Sites

	Intellectual disability (n=10)	Autism (n=16)	Others[a] (n=11)	F
	M (SD)	*M (SD)*	*M (SD)*	
Importance	4.54 (.34)	4.61 (.25)	4.63 (.38)	.23
Implementation	3.63 (.71)	3.83 (.42)	3.66 (.51)	.52
Difference between importance and implementation	.91 (.64)	.78 (.45)	.97 (.46)	.51

Note. [a]Physical disability, heating impairment, visual impairment, and others

With regard to the degree of implementation, PSSEs who completed the practicum in special schools for autism (M = 3.83) performed much more successfully than those who completed the practicum in the schools for others (M = 3.66) and intellectual disability (M = 3.63). However, there was no significant difference among the three groups (F=.52, p >.05).

The three groups all rated the degree of importance of the teaching competencies higher than that of implementation. In particular, the mean differences of the scores between the importance and the implementation were .97, .91 and .78 for PSSEs who completed the practicum for the school for others, intellectual disability, and autism, respectively. However, the differences were not statistically significant (F = .51, p > .05).

Discussion

This study investigated perceptions of PSSEs who completed their practicum on the importance and implementation of teaching competencies in order to analyze a difference between the degree of importance and implementation, and the factors that might cause the difference. As a result of the analysis, the degree of importance of teaching competencies was significantly higher than that of implementation. In other words, PSSEs perceived that they didn't implement the items of teaching competencies in comparison to the degree of importance that they perceived them to have. Furthermore, there was a significant difference between the importance and implementation in all of the sub-domains including *Organizing content*, *Writing lesson plans*, *Considering individual characteristics*, *Encouraging student participation, Enhancing interactions, Practicing effective teaching strategies* and *Reflecting on one's own teaching.*

Based on the descriptive statistical analysis of data on each item of the index, the five highest and five lowest rated items were identified. Characteristics of these items can be summarized as follows. 1) The items regarding 'Considering individual characteristics', or 'Enhancing interactions' were rated relatively low in both importance and implementation although items regarding taking the present level of each student into account when planning or writing lesson plans were given high ratings in both importance and implementation. Furthermore, the item, *Take goals and objectives in the IEP of each student into account when planning lessons*, was perceived to be the least implemented one. 2) The items regarding 'Encouraging student participation' were considered to be the most important and the most implemented ones. 3) The items regarding 'Writing lesson plans' were perceived as being relatively low in the degree of importance but high in the degree of implementation, and 4) The item regarding monitoring whether knowledge and theory learned at a university were applied in a real classroom was ranked low in both importance and implementation.

In addition, we analyzed the differences across certification areas and disability types of the students who attend the practicum sites. In terms of the certification areas, the mean score of pre-service secondary special educators was the lowest in both importance and implementation of teaching competencies. In terms of disability types of the students who attend the practicum sites, it was indicated that PSSEs whose practicum sites were the special schools for students with intellectual disabilities showed the lowest mean score in both importance and implementation. In terms of the difference between the degree of importance and implementation of teaching competencies, the mean score of the importance was higher than that of implementation regardless of the certification areas or disability types of registered students. Those who majored in early childhood education and took a practicum at special schools for students with other disability types showed the largest gap between the importance and implementation. However, the difference in the degree of importance, the difference in the degree of implementation, and the difference in the gap between the two were not statistically significant across the certification areas and disability types.

The result indicating that the degree of implementation of teaching competencies was significantly low compared to the degree of importance implies that the current PPPs for special educators have not prepared the pre-service students sufficiently. Consistent with this result, Bouck (2005) found that only 48.3% of secondary special education teachers were satisfied with their pre-service special education programs. This indicates the need to provide PSSEs with more opportunities to learn and practice the components of *good teaching* through regular courses and extra-curricular programs before they take a practicum. Below are some suggestions to make this happen in Korean PPPs for special educators.

First, it is essential to reform the curriculum of pre-service special education programs which enable students in the programs to enhance their teaching competencies in connecting theory with practice. The course sequence in particular should be considered in the process of reforming the curriculum so that students systematically improve their teaching competencies. For example, it would be helpful for freshmen to enhance their capacities to identify individual characteristics of students with disabilities by providing them with opportunities to meet diverse students with different disability types. Sophomores could focus on promoting competencies that enable them to develop an IEP based on the results of a variety of formal and informal assessments designed to identify individual characteristics or present levels of the students with disabilities. It is necessary to give juniors a lot of opportunities to improve teaching skills through mock lesson experiences using various teaching strategies for considering the present levels and IEP goals and objectives of students with disabilities. Seniors need to have an opportunity to monitor their own capacities as a teacher by taking a more intensive practicum that allows them to practice classroom management and leading lessons in real classes based on what they learned in

pre-service special education programs.

Second, the university faculties in the pre-service special education programs need to reorganize their own teaching styles and class activities considering the components of teaching competencies. The most important task is to introduce real cases in university classes and develop a variety of assignments linked to the practices in the real field. For example, mock lesson assignments would be conducive to strengthen the teaching capacities of PSSEs, especially in learning the components of good lessons, disability characteristics, instructional strategies across the characteristics, and strategies to encourage interactions with others. Furthermore, team teaching with practicing special education professionals or inviting special educators to university classes as guest speakers would be helpful for enhancing practical teaching capacities for PSSEs, especially in terms of writing IEPs and lesson plans. In addition, opportunities to share and discuss the experiences and reflections during observation and volunteer activities in the field among PSSEs would be useful in refining their knowledge and skills.

Third, pre-service special education programs should establish systematic and ongoing collaboration relationships with a wide range of special education organizations. It is necessary not only to set aside a number of organizations that allow PSSEs to meet students with different disability types and characteristics during their college years, but also to appoint veteran teachers of each organization as practicum supervisors. In this way, PSSEs will be able to learn from the practicum supervisors about core skills which they should obtain and experience at each organization instead of just visiting many organizations. Given that stable funding needs to be planned to appoint and use practicum supervisors, it is necessary to have administrative support from university headquarters. Moreover, as educational organizations in the field provide practicum sites and veteran teachers for training PSSEs, it is important for universities to establish substantive win-win collaborative relationships with the organizations by providing them with support such as consulting and technical assistance from university faculties.

This study contributes to suggesting directions for improving Korean pre-service special education programs by developing a *Teaching competency index in special education* composed of core components identified in the literature regarding good lessons in special education and by investigating perceptions of PSSEs on the importance and implementation of the teaching competency index. However, this study has several limitations in that the survey was conducted at only one university and the degree of implementation was measured using only self-reported data of PSSEs.

As the number of students with disabilities in the inclusive education settings increases, one of the most important duties of special education teachers is to provide support for the inclusion of students with disabilities and consultation for general education teachers (Dingle *et al.*, 2004). However, given the field of Korean special education in which special schools and self-contained special education classrooms still exist, the teaching competency of special educators is a critical factor that affects the quality of special education and positive outcome of students with disabilities. In Korea, the number of universities with pre-service special education programs has dramatically increased and great changes have been made in the quality of curriculums and program management (Kim, 2009). However, there are some problems to be solved, including insufficient credit hours assigned to practicum and a limited number of courses related to practicing teaching skills. Therefore, the university faculties in Korean PPPs for special educators should make the effort to restructure the classes in order to balance theory and practice. At the program level, endeavors should be made to reform the curriculum and to establish partnerships with various educational agencies. Furthermore, university headquarters should provide administrative support such as funding and human resources in order to realize the solutions.

We expect there to be international discussions and sharing on how the teaching competencies can be best addressed in special education teacher preparation programs.

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Appendix 1. Survey Items

1. Take the present level of each student into account when planning lessons.
2. Take the goals and their objectives in the IEP of each student into account when planning lessons.
3. Take the chronological age of the students into account when planning lessons.
4. Pay attention to the students' interests when planning lessons.
5. Include the activities that can enhance basic academic skills (*e.g.*, reading, writing, speaking, listening, and math) when planning lessons.
6. Include functional activities that are conducive to daily life when planning lessons.
7. Plan for generalization of what students have learned in class when planning lessons.
8. Differentiate the lesson objectives based on the present level of each student when writing lesson plans.
9. Make sure that every necessary component is included in lesson plans.
10. Include core content when organizing the activities in lesson plans.
11. Refer to various resources and information related to the content of the lessons when writing lesson plans.
12. Consider the connection with other subject areas when writing lesson plans.
13. Apply a variety of instructional strategies considering the contents and features of the subject.
14. Apply a variety of instructional strategies in class based on students' individual characteristics.
15. Modify instructional content and strategies considering various difficulties the students may experience in class.
16. Utilize the learning materials that are appropriate for students' individual characteristics.
17. Motivate students to learn during class.
18. Encourage students to participate actively in class.
19. Provide students with opportunities for choice during class.
20. Provide all students with equal opportunities to participate in class activities during class.
21. Use appropriate prompts to encourage students' participation and performance.
22. Ask questions considering the present level and response mode of each student during class.
23. Answer students' questions sincerely during class.
24. Be aware of students' behaviors and speech, and respond to them sensitively during class.
25. Provide concrete feedback and reinforce students' performance during class.
26. Provide opportunities for interactions between students during class.
27. Arrange students' desks considering students' participation and interactions.
28. Use a variety of instructional forms (*e.g.*, one-to-one instruction, small group instruction, large group instruction, etc.) considering students' characteristics and lesson content.
29. Review the previous class lesson briefly.
30. Walk around classroom instead of standing in one place during class.
31. Introduce instructional objective(s) and lesson content after students pay attention to the class.
32. Plan transition time to naturally transit between activities during class.
33. Adjust instruction and learning pace to keep instructional time.
34. Provide students with opportunities to practice what they learned during class.
35. Use strategies to prevent problem behaviors during class.
36. Deal with problem behaviors calmly during class.
37. Assign appropriate roles to assistant staff (*e.g.*, paraprofessional, social service personnel, and volunteer) during class.
38. Remind students of roles (expected behaviors) that they should follow them in class.
39. Pay attention to whether students joyfully participate in class.
40. Evaluate whether all of students who participated in class met their own learning goals.
41. Take time after class to reflect on anything that should be improved related to the preparation and use of lesson materials.
42. Take time after class to reflect on whether lesson components were fully presented just as they were planned.
43. Take time after class to reflect on whether the teaching capacity was improved based on self-monitoring or supervisor’s advice about previous lesson.
44. Monitor whether knowledge and theory learned at a university were applied in the process from lesson preparation to the actual lesson in class.