

KICCE

2013

KICCE

**PROJECT REPORT  
ABSTRACTS**

Korea Institute of Child Care and Education

7F, 8F, 10F, 11F, Anguk bldg, 33, Yulgok-ro Jongno-gu Seoul, 110-734, Korea

Tel 82-2-398-7700 Fax 82-2-730-3313

[www.kicce.re.kr/eng](http://www.kicce.re.kr/eng)

# 2013 KICCE

## PROJECT REPORT ABSTRACTS

## 2013 KICCE PROJECT REPORTS

### Major Research Projects

08	Time Usage of Young Children Ages 1-4
10	The Issues of Ensuring High- Quality Child Care for Infants
13	Promoting Community-Based Cooperative Childcare
16	A Study on the Employment of Middle-Aged and Elderly Female Workforce at Childcare Support Institutions
18	Improving the Welfare of Early Childhood Teachers
20	Strategies for Character Education in Early Years to Prevent School Bullying
22	Current Status and Protective Measures of Young Children's Exposure to Media Devices
24	Preparing for Post-Reunification Era: Creating a Coherent Early Childhood Care and Education System between South and North Korea
27	Establishment and Operation of Public Childcare Centers
30	Forecast on Demand for ECEC Services in Korea
33	A Roadmap for Improving ECEC Policy in Korea
36	Childrearing Price Index and Parents' Perception of the Cost of Childrearing
39	Early Childhood Care and Education-Related Service Industries in Korea
42	Improving Parental Capacity for Supporting Children's Happiness
44	Analysis of Current Trends and Issues of Early Childhood Education and Care Policies in Advanced Countries
46	Child Care Support System for Vulnerable Households : Focusing on Multi-cultural Families

48	The Usage Status of Cultural Infrastructure for Young Children and Its Support Policies
50	Achievements of the Childcare Policy in 2013 and Future Tasks
52	Outcomes of the Early Childhood Education Policy in 2013 and Future Tasks
54	A Pilot Study on the Cooperation Model of Early Childhood Education and Childcare in Korea (Year 5): Focusing on Operative Cooperation of "NURI Curriculum for 3 to 5-year-olds"
58	A Study on the Measures to Support Childbirth and Rearing for Families with Late Childbirths
60	Father's Participation in Childrearing: Current Status and Support Strategies for Family-Work Balance
63	Ensuring quality implementation of the "Nuri Curriculum for Age 5"
66	Evaluating the Effect of the "Nuri Curriculum for Age 5" using a Child Observation Rating Scale
68	The Effect of the "Nuri Curriculum for Age 5": Focusing on Elementary School Adjustment
71	Evaluating and Monitoring the Effectiveness of the Nuri Curriculum for Ages 3 and 4: The Development of a Child Observation Rating Scale
74	Current Status of the Operation and Use of the "Nuri Curriculum for Ages 3-4" and Suggestions for Improvement
77	Estimating the Costs of Using Child Care and Education Services
80	Improving the Quality of Childcare: Cost Estimation for Providing Quality Childcare Services
83	Cost Estimation for Kindergarten Education under the Implementation of Nuri Curriculum
86	Panel Study on Korean Children (PSKC) 2013

### Occasional Research Projects

90	Developing Common Indicators of Kindergarten Quality: Suggestions for the Third National Kindergarten Assessment in Korea
92	Measures for Stimulating Consulting-Supervision System in Kindergarten
94	Developing a Model of Special Training System of Sabbatical Leave for Kindergarten Teachers
96	Middle- and Long-Term Planning to Address the Staffing Demands for Public Kindergartens
99	Comparison of Financial Supports for Kindergartens and Childcare Centers
103	Setting Enrollment Priority Groups for Childcare Centers
106	Development of E-books for Parents: Introducing "Nuri Curriculum 3-5"
108	Current Status of Using Student Records in Kindergartens and Improvement Measures
110	Determining Class Size and Ratio in Childcare Centers: Focusing on Preschool Classes
112	Effective Operation of Parent Monitoring System in Childcare Centers

# Major Research Projects

2013 KICCE PROJECT  
REPORT ABSTRACTS

- Time Usage of Young Children Ages 1-4
- The Issues of Ensuring High- Quality Child Care for Infants
- Promoting Community-Based Cooperative Childcare
- A Study on the Employment of Middle-Aged and Elderly Female Workforce at Childcare Support Institutions
- Improving the Welfare of Early Childhood Teachers
- Strategies for Character Education in Early Years to Prevent School Bullying
- Current Status and Protective Measures of Young Children's Exposure to Media Devices
- Preparing for Post-Reunification Era: Creating a Coherent Early Childhood Care and Education System between South and North Korea
- Establishment and Operation of Public Childcare Centers
- Forecast on Demand for ECEC Services in Korea
- A Roadmap for Improving ECEC Policy in Korea
- Childrearing Price Index and Parents' Perception of the Cost of Childrearing
- Early Childhood Care and Education-Related Service Industries in Korea
- Improving Parental Capacity for Supporting Children's Happiness
- Analysis of Current Trends and Issues of Early Childhood Education and Care Policies in Advanced Countries
- Child Care Support System for Vulnerable Households : Focusing on Multicultural Families
- The Usage Status of Cultural Infrastructure for Young Children and Its Support Policies
- Achievements of the Childcare Policy in 2013 and Future Tasks
- Outcomes of the Early Childhood Education Policy in 2013 and Future Tasks
- A Pilot Study on the Cooperation Model of Early Childhood Education and Childcare in Korea (Year 5): Focusing on Operative Cooperation of the "Nuri Curriculum for Ages 3 to 5"
- A Study on the Measures to Support Childbirth and Rearing for Families with Late Childbirths
- Father's Participation in Childrearing: Current Status and Support Strategies for Family-Work Balance
- Ensuring quality implementation of the "Nuri Curriculum for Age 5"
- Evaluating the Effect of the "Nuri Curriculum for Age 5" using a Child Observation Rating Scale
- The Effect of the "Nuri Curriculum for Age 5": Focusing on Elementary School Adjustment
- Evaluating and Monitoring the Effectiveness of the Nuri Curriculum for Ages 3 and 4: The Development of a Child Observation Rating Scale
- Current Status of the Operation and Use of the "Nuri Curriculum for Ages 3 -4" and Suggestions for Improvement
- Estimating the Costs of Using Child Care and Education Services
- Improving the Quality of Childcare: Cost Estimation for Providing Quality Childcare Services
- Cost Estimation for Kindergarten Education under the Implementation of Nuri Curriculum
- Panel Study on Korean Children (PSKC) 2013

## Time Usage of Young Children Ages 1-4

Namhee Do  
Jeong Sook Kim  
Minkyung Ha

### Purpose

- The aim of this study is to understand the basic daily routines and environmental factors that affect the development of infants and young children by examining children's use of time.
- By comparing the amount of time spent on each behavioral domain and investigating the daily routine of young children, the study aimed to understand the customary time for each behavior domain, the amount of time spent with particular individuals, and their respective ratios.

### Methods

- Data was collected from observations of 500 children ages 1 to 4 residing in Seoul, Gyeonggi, and Incheon regions. The percentage of boys and girls was almost equal (51.2% and 48.8% respectively). The number of children in each age group was almost equal as well (from children aged 1 to 4, 25.6%, 26.6%, 23.6%, and 24.2%, respectively)
- Children's daily routines were observed. Collected data was analyzed in terms of the following:
  - Comparison of time spent on weekdays and on weekends
  - Amount of time spent on each behavioral domain
  - The ratio of solitary time to accompanied time for each behavioral domain
- The data collected was analyzed to understand the characteristic daily time usage at each age. Lastly, the same data was analyzed in relation to:
  - Child-rearing practices of the mother
  - Employment status of the mother
  - Gender of the child

### Results

#### Time usage

- Time usage for children ages 1-4: Time spent on personal maintenance (14hr 50 m), social interaction and leisure (4hr 44 m), with childcare providers (3hr 8m), time in transit (1hr 4 m), learning (10m), helping with housework (1m)
- Time spent asleep: age 1 (12hr 20m), age 2 (11hr 49m), age 3 (11hr 32m), age 4 (11hr 29m)
- Time spent on learning: age 2 (2m), age 3 (5m), age 4 (5m)
- Time spent with a childcare provider: age 4 (3hr 40 m), age 3 (3hr 28 m), age 1 (2hr 15 m)
- Time spent in social interaction and leisure: age 1 (5hr 3 m), age 2 and 3 (4hr 41 m and 4hr 40 m, respectively), age 4(4hr 30m)
- Hours spent alone (61.9%), with mother (18.9%), with father (13.1%), with teacher (11.5%), and with siblings (11.1%)

### Implications

- Early intervention is required for improvement in sleeping patterns of children under five to establish healthy routines.
- Suggestions regarding such basic things as adequate amounts of sleep, proper amounts of time spent using media, and methods of study to encourage self-sufficiency need to be provided.
- Use public service announcements to offer information on healthy life habits for young children.

## The Issues of Ensuring High-Quality Child Care for Infants

Meehwa Lee  
Jungwon Min  
Ji-won Eom  
Jiyeon Yun

### Purpose

- The purpose of this study was to inform policy on the provision of high-quality childcare for infants and toddlers with consideration of their growth and development as well as demands from parents and teachers.

### Methods

- Data was collected through questionnaires completed by childcare center administrators (n=271), teachers (n=422), and parents (n=400); and through observations of children (n=374) and their teachers' (n=187) in selected child care centers (n=70).

### Results

#### Current conditions and parents' demands in using service

- Infants and toddlers spent 7.6 hours a day on average in childcare centers.
- Working mothers were the main users of childcare services. Non-working mothers mainly used childcare services in order to ease the burden of child-rearing.
- Parents selected childcare centers based on the following criteria, listed here in order of priority given:
  - Reputation of the childcare center
  - Proximity to the home
  - Type of facility (e.g., government-run, non-profit publically funded, or private childcare centers)

#### Current conditions and teachers' demands in managing institution

- According to the surveys completed by childcare center administrators and teachers, the Infant

- Care Curriculum was well-implemented in most institutions. For those few childcare centers in which the curriculum was not yet adopted or was under-implemented, the survey respondents felt that further adoption of the curriculum and related teacher training were warranted.
- The most valued characteristic of teachers working with infants was the ability to interact well with them.
  - Childcare center administrators and teachers agreed that lowering the teacher to child ratio was a priority, yet had differing views on the proper amount of hours for infants to receive care in the centers.
  - Infant classes emphasized health and safety the most, and classes for older children tended to focus more on providing play-based activities and artistic experiences.
  - Teachers pointed out the need for mandatory pre-parenting education and for educating parents about the necessity of collaborating on childcare responsibilities with caregivers.

#### Class observation analysis

- While infants mainly played with their teachers, there were differences in their play partners depending on the age of infants, the number of age groups in mixed-age classes, and the teacher-infant ratio.
- New born babies were more likely to engage in sensory-motor and physical activities, and children aged 1 to 2 in role-playing games, block play, and sensory exploration activities.
- As to the status of emotional development of infants, most infants displayed moderate to positive status.
- Infants' level of participation in classroom activities was mostly active, with a few showing a passive level, and even less showing no participation.
- Teachers' activities varied depending on the number of age groups in mixed-age classes. The activities included play-based experiences and guidance.
- When teachers intervened in infants' activities, the majority of them did it sophisticatedly with full concentration; some intervened simplistically with minimal help.

### Implications

- Improve child care environment: by lowering the teacher to infant ratio, by reducing the hours of overtime for teachers, and by increasing the physical space for infant classes
- Provide support for teachers: by delineating their role identity and responsibilities, providing in-service training with user-oriented content, by assigning additional staff in classrooms, and by increasing the range and amount of benefits for teachers.
- Utilize infant care programs such as the Standard Infant Care Curriculum/Program: by providing more in-service training opportunities for teachers to learn about and implement the Standard Infant Care Curriculum/Program
- Strengthen relationships with families and encourage parental responsibility in child rearing: by considering factors influencing parental choice of child care centers and by enhancing parent education.
- Build community connections for cooperative infant care.

## Promoting Community-Based Cooperative Childcare

Haemi Yu  
Moonjeong Kim

### Purpose

- Parental demands on child care have become varied. To respond to such varied demands and to offer pertinent policy solutions, support policy needs to be specified and sophisticated. Community-Based Cooperative Childcare has emerged as an attractive alternative to standardized child care service provision. However, as it is in its initial stage, there have been many reported difficulties experienced by parents. The purpose of this study was to investigate the cases of parent cooperative childcare centers and to shed some light on the way to facilitate them.

### Methods

- Data was collected from a survey and interviews. The survey was completed by parents (n=867) using the services provided by parent-run cooperative childcare centers (Q: yet, results are around 3 types of co-op childcare including parent-run co-op childcare) consisting of both public (n=527) and non-public (n=340) centers. In-depth interviews were conducted with parents, center administrators, and policy practitioners.

### Results

#### Current status of parent-run cooperative childcare

- The number of cooperative childcare centers increased by 2.7 times in the period 2005-2012 (42 to 113), and children enrollment was up by 3.1 times.
- Parents chose the cooperative childcare service due to the quality of program content (47.3%), reliability of the cooperative childcare service, (18.9%), trust in the teaching staff (12.6%), and

food safety (7.7%). Parents showed a high level of satisfaction overall, and especially with meals and snacks (4.6 out of 5), and hours of operation (4.3 out of 5).

- Limited financial resources for operating centers were mentioned as a major challenge. The most urgent issue was securing sites for permanent use.

#### Current status of government-sponsored community centers supporting cooperative childcare

- As of December 2012, there were 23 Healthy Family Support Centers and 64 community centers nationwide that function as sites for communal childcare.
- Full-time mothers (86.8%) were main users. Most families used the service during afterschool hours (3-5 PM).
- Parents used the service for following reasons: secure location, communication channel among participating parents, and the feeling of belonging within the community.
- Major difficulties were low accessibility to information and difficulties with the pressures of contributing to communal work.
- To improve the service, parents suggested the following: securing a location, hiring professionals, providing initial support to address financial and staffing problems, and developing and disseminating effective programs for communal childcare.

#### Current status of cooperative childcare initiated by local community members

- Local community-based cooperative childcare initiatives often make use of local libraries, community centers, or separate spaces to increase support for communal activities and cooperative parenting.
- The following needs were identified: promotion of cooperative childcare programs, ensured accessibility to local sites, provision of enhanced consulting, support for operational expenses and staffing

### Implications

- Cooperative childcare centers
  - Develop and disseminate a set of guidelines for cooperative childcare centers, especially with regard to establishment, daily operation, and administration.
  - Establish childcare centers by utilizing available public spaces or facilities within the community
  - Provide consultation for more effective operation
  - Offer systematic support for in-service training
- Government-sponsored community centers
  - As with cooperative childcare centers above, government-sponsored community centers also need improvements in relation to management, provision of spaces, consulting, and in-service training.
  - Additionally, community centers in particular need the extension of their hours of operation and dissemination of best practices.
- Cooperative childcare services initiated by local community members
  - As with the other types of childcare, there is a need for greater provision of space and facilities, funding, staffing, and consulting services. In addition, leadership training needs to be provided to help parents become competent community leaders.



## A Study on the Employment of Middle-Aged and Elderly Female Workforce at Childcare Support Institutions

Jeong-won Lee  
Yujin Yang

### Purpose

- Using support staff in childcare support institutions has a positive impact on lightening burden on ECEC service practitioners and, as a result, to improve the overall quality of care. The purpose of the study is to suggest ways to utilize middle-aged and elderly women, in particular the unemployed, as support staff in childcare support institutions.

### Methods

- Data was collected from a survey completed by ECEC service providers (n=600) and in-depth interviews with childcare center staff (n=7) and middle/old aged women participants (n=5).

### Results

#### Utilization of human resources in ECEC service institutions

- The survey revealed that the teachers struggled with handling multiple tasks and the retention rate of teacher aides in each institution varied considerably depending on the types of work. Those raised serious concerns about the quality of the service. In order to improve the service quality, it was recommended that ECEC service providers recruit more teaching aides to support teachers.
- In particular, demand was high for people to fill such positions as assistant teacher, education/childcare helper, janitorial staff, and secretarial assistants. It was felt that these positions could be adequately filled by women over 40.
- As for kindergartens and childcare centers, it was more challenging to recruit an adequate number of teacher aides due to budget constraints and the lack of sufficient supply in their local community.

#### Level of middle-aged or elderly females' interest in employment at childcare support institutions

- The majority of respondents (88.8%) indicated that they were willing to work in the near future, and that half of them had considered employment at childcare support institutions. Talent and interest were regarded as important factors in choosing to work as a teacher aide.
- The respondents indicated that the following supports would be helpful: training support (34.6%), link-up with employment agencies (18.3%), and provision of job-related information (17.7%).

#### The needs of middle/old aged women and childcare support institutions

- Job seekers of all positions generally agreed with institutions about working hours, but had different ideas on compensation. Yet classroom aides, in addition to wages, disagreed about the amount of working days per week and working hours per day.

### Implications

- Prioritize the following three areas in policy making:
  - Service quality improvement in ECEC institutions
  - Improvement of early education/childcare environments
  - Increased employment opportunities for middle-aged or elderly women
- Develop a comprehensive model that incorporates the above policy directions. Specific recommendations include the following:
  - Specify criteria for recruiting support staff
  - Standardize working conditions
  - Link job training programs with employment agencies

## Improving the Welfare of Early Childhood Teachers

Eunyoung Kim  
Hyejin Jang  
Hyejoo Cho

### Purpose

- Given early childhood teachers' impact on early childhood development, their work intensity, degree of expertise required, and the wide variations among their educational qualifications, it is necessary to understand the welfare of early childhood teachers. The purpose of this study was to examine current welfare status of early childhood teachers and their demands. Based on the findings, policy recommendations were presented.

### Methods

- Data was collected through a review of literature on welfare policies, teacher survey, focus group interviews, and advisory meetings and workshops. Teacher survey was completed by early childhood teachers (n=1,543) employed in kindergartens (n= 771) and child care centers (n=772). Focus group interviews were conducted with 36 teachers.

### Results

#### Selected findings from literature review

- The welfare of teachers are seen as working conditions of teachers, and it includes a wide range of topics such as wages, workload, work hours, working conditions, training opportunities, and intensity of emotional labor.
- International studies report that the quality of education and care is positively linked to working conditions for teachers.

#### Welfare of early childhood teachers and teacher perceptions

- Early childhood teachers work far longer hours than legal work hours (40 hours). Kindergarten

- teachers work 45.7 hours a week, and childcare center teachers work 55.1 hours a week.
- Most early childhood teachers use annual leaves (kindergarten teachers-81.4%; childcare center teachers-83.3%). More than half of kindergarten teachers (53.8%) and more than a third of childcare center teachers (36.7%) reported that they can use leaves for marriage and funeral.
- More than half of kindergarten teachers (58.3%) and more than a third of childcare center teachers (35.6%) reported that they have a designated room for teachers.
- About half of kindergarten teachers (48.1%) and about two thirds of childcare center teachers (64.2%) reported that current workplace is not their first one. Major reasons for leaving their previous workplace include miscellaneous work (for kindergarten teachers, 28.9%) and low salary (for childcare center teachers, 34.1%)
- Raising the salary level of teachers of kindergartens and childcare centers was selected as top priority (24.5% for kindergarten teachers, 52.7% for childcare center teachers)

### Implications

- Reduce workload and working hours
- Support teachers to balance work and family responsibilities by ensuring vacation and leave.
- Provide financial and administrative support for professional development and increase opportunities for promotion.
- Set standards for the facilities and equipment reflecting needs of teachers (e.g., each center should have a teacher's lounge).
- Ensure fair and transparent recruitment process and job stability.

## Strategies for Character Education in Early Years to Prevent School Bullying

Eunseol Kim  
Eun-Young Choi  
A Ra Cho

### Purpose

- Increased attention has been given to the issues of school bullying. One of the key questions that need to be addressed is how peer harassment problems in schools can be fundamentally prevented. The purpose of this study was to present a theoretical model of Character Education (CE) for children in early childhood education and care (ECEC) settings by examining the status of CE in ECEC institutions in Korea.

### Methods

- National data was collected from online survey, telephone interviews, case studies, and policy advisory meetings. One thousand centers across the nation were randomly selected. A director (or a teacher) and a parent from each selected center were asked to complete a survey. Telephone interviews were conducted with staff in the Education Department of local governments.

### Results

#### Current status of CE in ECEC institutions

- The majority of teachers and parents (93.4% of all survey respondents and 85.6% of parents) responded that family has the most influential role in early childhood character development.
- About half of teachers (50.2%) observed bullying in class. About one third of teachers (36.7%) observed young children in their classes using abusive language or slangs.
- About half of teachers (42.8%) did not receive any training in CE (e.g., workshops or training programs for CE)
- Regarding the aspects to be prioritized to support CE at home, the following items were identified:

- A social context where parents can spend more time with their children (25.8%)
- Provision of CE materials (24.5%)
- CE supports by kindergartens and childcare centers (22.3%)
- Increased opportunities for parent education in CE (13.7%)
- Increased support from government for CE (12.5%)

#### Case Studies of CE in Exemplary ECEC Institutions

- Cases of 10 outstanding ECE institutions, selected by Ministry of Education and Ministry of Health and Welfare, were examined.
- Common characteristics of the exemplary institutions were their various efforts for providing children with environment for “emotional stability”
- As ways to support children’s psychological and emotional wellbeing, the ECEC providers utilized activities such as arts, and cultural events, and field trips to natural settings.

### Implications

- Develop and offer targeted CE training options for EC directors and staffs
- Provide increased and diversified opportunities for parent education
- Create favorable environment for CE in institutional settings: by enforcing regulations to ensure adequate indoor space for children, by increasing outdoor play time, and by strengthening relationship with local community.
- Develop and implement effective CE programs focusing on self-control and understanding others.

## Current Status and Protective Measures of Young Children's Exposure to Media Devices

Jeongrim Lee  
Namhee Do  
Yoo Jeong Oh

### Purpose

- The purpose of this study was to examine the condition of young children's use and exposure to media, and to suggest ways to avoid negative consequences of their excessive use.

### Methods

- Parents with children aged 0 to 5 living in Seoul and Gyeong-gi regions, along with child care administrators and teachers, completed a survey and participated in in-depth interviews.

### Results

#### Media exposure of infants and young children

- Most of infants and young children watch TV, and half of them use smartphones.
- 30% of parents reported that they habitually keep TV turned on at home. 25% of parents responded that their young children were exposed to TV because family members watched TV.
- Young children use media mainly because they like it and because they want to have something in common with their peers.

#### The relationship between young children's use of smartphones and parental use

- Infants and toddlers use smartphones for longer hours than preschoolers, which shows the trend that the average age of children using smartphones is getting younger
- The earlier the starting age of using smartphones, the longer the hours of use
- The longer the hours of parents' using smartphone, the longer the hours of children's smartphone use
- The longer the hours of parents' using smartphone, the earlier the children's exposure to smartphones

#### Issues with children who may be addicted to smartphones

- A lack of opportunities for learning and physical activities
- A lack of ability to empathize and to express one's emotions
- Lost opportunities to improve one's self-esteem

### Implications

- Provide parent education and related materials for a well-controlled use of media at home
- To prevent excessive use of media, provide opportunities for play-based learning that children can enjoy with parents, and expand a healthy environment for play
- Develop Early Childhood Media Addiction Observation Index
- Develop regulations on early childhood media use and policy measures for each age group of children

## Preparing for Post-Reunification Era: Creating a Coherent Early Childhood Care and Education System between South and North Korea

Yun-Jin Lee  
Ja-Yeun Koo

### Purpose

- Recent studies emphasize the significance of social and psychological integration of the citizens of the two Koreas.
- Based on the government's 3 step unification measures (1. Reconciliation and Cooperation; 2. Integration; 3. Unification), the purpose of this study was to examine strategies and challenges in each phase with regard to the area of early care and education support policy.

### Methods

- Data was collected from a review of literature and online survey. 44 South Korean experts (North Korea specialists) and 37 North Korean refugees (those with a background in early childhood education or with a higher education degree) completed an online survey.

### Results

#### Daycare centers and kindergartens in North Korea

- There were about 60,000 daycare centers and kindergartens in North Korea in the 1980's, but the number decreased to about 41,000 in 2008 due to economic downturn.
- Though there are ideological differences, the South and the North share common in terms of basics in child care: both societies aim to provide quality child care environment, prioritizing the benefits of children.

#### Recognition on the necessity of supporting North Korean children

- 58.0% answered that humanitarian aids should continue despite the North Korean regime's stance or politics

- A whopping 96.3% answered that aids for children in the North could be a cornerstone of unification.
- Focus should be expanded from current temporary emergency relief projects to initiatives that aim to strengthen the capabilities of the North

#### Measures in terms of South - North Exchange/Cooperation

- Ten projects were suggested such as South-North seminar on child care and education, exchanges at private level, statistics on common areas of child care and education in South and North, inter-Korean visits (teachers/directors of kindergartens and children), etc.
- At this level, the strategy is to focus on older generation (adults), and expanding it to younger generation later. Starting with non-political exchanges, it can be gradually expanded to political area. One-time event needs to be carried out first, and then regular projects. Partial exchange needs to be made first, and then the exchanges in all areas. It is a win-win strategy to create mutual benefit based on reciprocity.

#### Measures in terms of South-North Integration

- In the initial stage, develop South-North common child care support policies based on the understanding of the two different political systems. Then, move on to the understanding and making efforts to accept the differences, and strengthened cooperation for the creation of compromised model.
- Latter part of the integration is designed to unify two different systems. Unilateral integration, however, is not desirable. Instead, compromised or a brand new model should be created through negotiations.

#### Measures in terms of Unified Korea

- Develop/pursue nondiscriminatory child care policy for all children and teachers in the South and the North since social and psychological integration is important.

### Strategies for the Integration of South-North Child Care

- Main player: Quasi-government agencies (e.g. KICCE)
- Strategies: Establishing South-North child care support policy consultative group, securing stable budget, and utilizing an international organization as an arbitrator, etc.

### Implications

- Remind the importance of child care support in unification policy discussions
- Suggest child care support projects within the government's unification policy and principle.

## Establishment and Operation of Public Childcare Centers

Misun Yang  
JooYoung Jung  
Jihee Im

### Purpose

- This research was to define public nature of the operation of childcare centers and kindergartens, understand the current status of establishment/operation that is related to public nature, and analyze it. Based on the analysis, the research finds the ways to enhance public nature of the operation of childcare centers and kindergartens.

### Methods

- Data was collected from a review of literature, survey, group interviews, and advisory group meetings. A survey was completed by 72 experts in child care, preschool education, social welfare, education, and administration, and administrators/teachers working in 511 child care centers and 414 kindergartens. Interviews were conducted with a group of local government officials in charge of education department, experts in early childhood care and education, EC program directors, teachers, and parents.

### Results

#### Public nature of childcare centers and kindergartens

- Definition of "Public Nature of Childcare and Education": Providing quality child care and education services to all children regardless of their social/economic background to guarantee equal starting point

### Analysis on the public nature of childcare center and kindergarten operation

- 21 items were developed to analyze the public nature of childcare center and kindergarten operation such as universality, openness, transparency, and community involvement.
- On average, childcare centers received either equal (i.e., openness) or higher scores than kindergartens in all four dimensions of public characteristics.
- In terms of universality, Kindergartens received higher average scores than childcare centers (4.54 and 4.30 out of 5, respectively). In terms of openness, both kindergarten and childcare center groups received 4.08. In terms of transparency and community involvement, childcare centers (4.58 and 4.27, respectively) received higher scores than kindergartens (4.17 and 3.78, respectively).
- In all areas, public kindergartens and publicly-funded childcare centers (and family day care) received higher scores than private kindergartens and childcare centers.

### Measures to enhance public nature of childcare centers

- Limit the number of childcare centers that one individual can establish/operate: Only one childcare center per individual would need to be allowed. Control the establishment of for-profit childcare centers by creating qualification standard for childcare center administrators.
- Develop evaluation index by reflecting the following factors: whether parent satisfaction survey is conducted on a regular basis and whether the result is reflected in the operation of the childcare center.
- Introduce real-name system for information notification, thereby giving responsibility to the person in charge
- Utilize childcare information centers (similar to Child Care Resource and Referral agencies in the U.S.) of each city and province to support childcare centers continuously by forming expert networks consisting of directors of childcare centers, labor attorneys, tax accountants, and certified public accountants, etc.
- Childcare information centers provide training of steering committee members on a regular basis.

### Measures to enhance public nature of kindergartens

- Conduct kindergarten needs surveys on a regular basis, and, depending on the result, determine the number of kindergartens to be authorized.
- Strengthen the connection between kindergarten assessment results and consulting, and maintain the quality of education through systematic follow-up care
- Establish a kindergarten assessment body within the Early Childhood Education and Development Institute, and let it manage assessment committee, analyze data, and develop assessment indexes.
- Introduce real-name system for information disclosure; show the name, title, and position of the person in charge of information notification of each kindergarten.
- Establish an error-report center to notify errors in kindergarten information, and strengthen self-verification system.
- Make it mandatory to form a steering committee of kindergartens.

### Implications

- Public nature of childcare centers and kindergartens can be improved with an attention to efficiency in terms of using available government funds to support early childhood programs, and of meeting parents' expectations on child care and education.

## Forecast on Demand for ECEC Services in Korea

Yoon Kyung Choi  
Jungwon Min  
Keewhan Kim  
Sewon Lee

### Purpose

- Childcare support policy's impact can be improved if it is planned and designed based on the forecasts of short-term demands and long-term outlook. The purpose of this paper is to predict demands for childcare centers and kindergartens for the next 5 years, and to forecast modes of childrearing and demands for child care support policy in 2040.

### Methods

- Data was collected from a review of literature (on future studies), focus group interviews, and online survey. Survey was completed by three groups of respondents (n=1,365), including future parents (young adults, n=600), current parents (n=600), and experts (n=165).

### Results

#### Forecast on short-term demand for the use of kindergarten and childcare centers

- More infants (ages 1 and 2) will use childcare centers for the next 5 years, thereby increasing the rate near 80~90% (close to that of toddlers'). Usage rate of age 0 will increase as well, but not as much as that of ages 1 and 2. For ages 4 and 5, usage rate will be maintained at similar level (age 4: 37~39%, age 5: 31~32%), but the number of children who use childcare centers will likely decrease, while those who attend kindergarten will likely increase. It is necessary to pay attention to controlling quality, and supply and demand of childcare centers. For age 3, 5% increase is expected for the next 5 years compared to 57% in 2012.
- Given the decreasing number of infants and toddlers (due to the low fertility rates), it is necessary to consider and discuss the following:
  - Ways to control quality (as well as supply and demand) of ECEC services (in terms of

- teachers, ECEC programs, and infrastructure) in the middle-long term
- Integration of ECEC services
- ECEC policy design for ages 0 and 1

#### Mode of childrearing in 2040 and demand forecast

- Diversification of child care support services and continuous increase in child care service use are expected.
- More paternal participation in child-rearing and fair division of household chores
- More ECEC service use
- Expansion of ECEC service industry and related business
- More children cared for by non-family members and increased use of private education services
- Demands for childcare support policy in the future:
  - Favorable environment for raising children
  - Social environment where the rights and welfare of children are guaranteed
  - Working condition that enables work-family balance.
- To create these conditions, the following is needed:
  - Socio-cultural change that supports policies such as mandatory parental leave and childrearing allowance
  - Support for young children from vulnerable family background
  - Enforcement policy with strengthened punishment for child abuse/violence criminals
  - Prevention/support for home-alone children

### Implications

- Set policy agenda for Korea's ECEC in 2040:
  - Seeking and sharing happiness



- Accepting diversity (non-formalization).
- Focus on qualitative and socio-cultural approach that enables a social environment that guarantees the rights of children and safe and healthy childrearing (rather than focusing on policies to improve macro-index such as birth rate and female employment rate). Future generation needs to be able to adapt to diverse life styles that transcend conventional concepts and boundaries of marriage, married couples, and families.
- Establish a balanced support system (that enables equal participation of parents in childrearing), and child-friendly community context that contributes to healthy growth and development of young children.

## A Roadmap for Improving ECEC Policy in Korea

Meehwa Lee, Myung-Lim Chang, Mugyeong Moon, Moon-hee Suh, Eunyong Kim, Eunseol Kim, Yoon Kyung Choi, Haemi Yoo, Eun-Young Choi, Misun Yang, Hyemin Lee, Jihye Na

### Purpose

- As a way of integrating the two-tiered system of early childhood education and care (ECEC) in Korea, this research aims to propose a roadmap for achieving quality improvements of ECEC policy in Korea. Specifically, the roadmap is to propose strategic directions for the development of ECEC policy and to establish standards for integrating the two separate systems into a coherent ECEC system (e.g., management of facility quality and teacher qualifications).

### Methods

- Data was collected from a review of literature, survey, policy document analysis, and advisory meetings with ECEC experts. ECEC experts (n=100) and parents (n=1,000) with young children aged 0 to 5 completed the survey.

### Summary

#### Problems in current ECEC system

- Currently, there is a wide gap among ECEC institutions (depending on types, auspices, and regions) in terms of accessibility, affordability, and quality of services. Parental rights to select the best ECEC option for their children have not been guaranteed or available to all parents.
- For ECEC institutions serving young children (ages 0 to 5), service quality for preschoolers (ages 3-5) has become more equal in some part; however, there are still great discrepancies in quality among institutions.

- Leakage and redundancy in utilizing human capital and financial resources are pointed out. It is due to a lack of coherent administrative delivery system.
- Integration of the two systems (Early Childhood Education and Child Care) has faced challenges due to conflicts among stakeholders and interest groups.

#### Parental awareness and demands regarding current two-tiered ECEC system

- As a major weakness of current two-tiered ECEC system, parents pointed out the discrepancy in operation hours and tuition between the two types of institutions, both serving the same age group of children. However, there are also many parents who reported that they had never thought about this issue.
- Parents hoped that the following aspects should be equalized between kindergartens and childcare centers (listed in the order of preference): the amount of government support, teacher qualifications, tuition (actual amount paid by parents), guidance and supervision systems, teacher compensation and benefits, and standards for facilities and equipment.
- As a major challenge of current ECEC system, ECEC experts pointed out the issues of service equity for ages 3~5, and confusion among parents when selecting institutions.
- The majority of experts (80%) said ECEC integration is necessary. Experts selected the following aspects to be equalized between kindergartens and childcare centers (listed in the order of preference): teacher compensation and benefits, guidance and supervision systems, and teacher qualifications.

#### Roadmap for ECEC policy development in Korea

- 1<sup>st</sup> stage: Group the ECEC programs into four types (depending on the auspices and size of facility): 1) Public or government-funded kindergartens, 2) Public, government-funded, or employer-sponsored childcare centers, 3) private kindergartens and childcare centers, and 4) family childcare centers.
- 2<sup>nd</sup> stage: Focus on the following two aspects as two main axes of integration factors: management of facility quality and teacher qualifications. Integration factor 1 is to develop and apply

integrated management system for information disclosure (to ensure: [1] parental rights for ECEC center selection, and [2] transparency of ECEC center operation), integrated regulations for finance and accounting, integrated evaluation indices, and common standards for center facility/equipment. Integration factor 2 is to manage teacher qualifications.

- 3<sup>rd</sup> stage: Adjusting the timing for implementing each policy, introduce the following integrated systems:
  - Short term: Introduce integrated information disclosure system and finance/accounting rules; develop and implement integrated evaluation index; and operate integrated supervision system.
  - Mid-long term: Integrate tuition standards for ECEC programs; integrate facility standards; and apply step-by-step approach by presenting mandatory and suggested standards.
  - Long term: Suggest a systematic integration model, including a unified standard for teacher qualifications and a unified administrative body in charge of ECEC, etc.

#### Implications

- The findings of this study reveal the need for more targeted policy research, especially on each aspect mentioned in the strategic directions and the roadmap. It is expected that the directions and roadmap will contribute to the establishment and development of a coherent ECEC system in Korea.

## Childrearing Price Index and Parents' Perception of the Cost of Childrearing

Yoon Kyung Choi  
Jinah Park  
Sewon Lee

### Purpose

- The expansion of childcare support policies (e.g., childcare allowance and education expense support) contributed to keeping the consumer price inflation rate low, affecting price control as a result. By calculating CPI (Childrearing Price Index) and Parents' Price Perception Index, this study aimed to investigate the effects of the childcare support policy and parents' perception of the impact. The CPI was calculated three times (May, July, and September) in 2013, by selecting and examining 53 representative items for childrearing. The expenditure weights were calculated based on the 2012 childrearing cost survey data (Choi, Yoo, & Song, 2012).

### Methods

- Data was collected from a literature review, document analysis (e.g., price-related data/reports from Statistics Korea), online and offline market research on childrearing prices, online survey of parents (n=818), and advisory meetings with experts and parents.

### Results

#### Findings from Examining CPI and Parents' Price Perception Index

- CPIs of all households with young children (ages 0-5) rose. This increase was attributed to cost increase in 51 items, despite the fact that the expenditure on kindergarten and childcare centers fell gradually.
- The majority of parents responded that they foresee a child-rearing price increase and an increase in future expenditure for the coming years. Parents felt heavily burdened with child-rearing prices and expenses. In comparison to an outlook and evaluation on current and future economic situation, parents had negative views on the current level of prices for children's goods and serv-

ices as well as on the expenditure to raise a child in the near future.

- Although the effect of childcare support policies is reflected on the decrease of parents' Price Perception Index measures in terms of the respective items (e.g., tuition for childcare center and kindergarten), childcare support policies did not generate significant effect on lowering the total price of childrearing items (and CPI as a whole) and parents' perception of it.
- An investigation of parents' price perception was conducted on each of the 53 representative items. The Parents' Price Perception Index was higher on items related to after-birth services (e.g., postnatal care centers, first birthday celebration/album) and durable goods (e.g., baby car seats, toys, educational materials) than items related to consumable goods (e.g., powered formula, outerwear).

### Implications

- To improve parents' satisfaction level of kindergartens and childcare centers, and to ease their financial burden of using ECEC services, expansion of child care supports are required along with quality management of kindergartens and childcare centers, parent education, and price control of overall child-rearing items (e.g., the items contained in the CPI).
- Conduct parent satisfaction surveys, consistent monitoring of market prices by consumer organizations, and periodic examinations of prices related to childrearing goods and services. By gathering this information, announce the CPI and Parents' Price Perception Index to the public.
- Expand the target group and content of childrearing price control from current service-centered practice to items related to child-rearing goods.
- Cost management on items related to kindergartens and childcare centers is necessary in the following three areas: providing cost information, applying cost cap, and controlling cost increase rate when it increases.
- Quality management of childrearing prices is necessary to give benefits equivalent to increased costs (e.g. labor cost increase of teachers) to young children and their parents.

- Monitor the cost increase and the increase rate of private education (including, private institutions, and home-study materials, etc.) as part of the market-price regulation policy, because price burden caused by private education/home-study materials is high.
- Consider the level of childrearing prices and its increase rate when designing childcare support policies (e.g., tuition support, childrearing allowances, and subsidies) and calculating standard costs for child-rearing and education.

## Early Childhood Care and Education-Related Service Industries in Korea

Moon-hee Suh  
Hyemin Lee

### Purpose

- With an increased funding support for early childhood care and education (ECEC) and high expectations on quality improvement in ECEC services as a result, external supports from business organizations have also grown. The purpose of this study is to identify the characteristics of business entities related to ECEC services by understanding its current state, and to forecast the future outlook from the perspective of those who are currently working in the industry. The study is expected to propose appropriate policy directions to support ECEC programs to maintain its unique identities and characteristics.

### Methods

- Data was collected from telephone interviews, in-depth interviews, online/offline research on ECEC-related services, and advisory meetings. Telephone interviews with ECEC program administrators were conducted to gather information about ECEC-related service providers in the areas of extracurricular activities/programs, accounting programs, instructional materials, and other services related to supporting ECEC program operation. Data from childcare centers (n=673), private kindergartens (n=163), and workplace childcare centers (n=559) were analyzed. In-depth interviews with business staff (n=25) of ECEC-related businesses were conducted.

### Results

#### Current status of ECEC-related businesses

- There are numerous business entities that dispatch instructors to provide services related to ex-

tracurricular activities/programs in childcare centers and kindergartens. The estimated number of instructors was close to 21,000 (childcare centers - 15,000; kindergartens - 5,700).

- There were about 20 business entities that provide accounting-related services for ECEC programs. ECEC programs spend approximately \$11 million for accounting services (childcare centers - \$9 million; kindergartens - \$1.8 million)
- The amount of money spent in buying materials in childcare centers is estimated at 23.1 billion won (approximately \$23 million) in June, 2013, according to financial accounting reports of childcare centers.
- Following businesses also provide services to ECEC institutions: cleaning, garbage collection, security, safety insurance, water purifier rental, air purifier care, office equipment rental, aquarium care, bidet management, website management, and information notification services to families.

#### Current status of delegate agencies running employer-sponsored childcare centers

- More than three quarters of employer-sponsored childcare centers are run by entrusted agencies (77.3%). In most cases, professional agencies (37.9%), universities (16.1%), or individuals (19.7%) were delegated to run employer-sponsored childcare centers.
- There are three types of professional entrusted agencies: (1) delegate agency signs a contract with a director to operate an employer-sponsored childcare center, and the director hires teachers; (2) delegate agency hires a director and teachers, and has a right to appointment and dismissal of center staff; (3) mixed type of 1 and 2.
- As the number of employer-sponsored childcare centers increases, it is necessary to establish standards for working with delegate agencies. The following is recommended: contract standards for businesses and institutions, standards for setting relationship between childcare centers and entrusted agencies, unified system for registering approval certificate and serial number, and employment standards for delegate agencies.

#### Implications

- ECEC institutions need to establish transparent relations with service businesses. To support ECEC institutions, we propose the following policy recommendations:
  - common standards for business contracts
  - operational standards for ECEC institutions
  - contract-related information disclosure
  - handling of business contracts by parent organizations (rather than by center administrators)
  - management of business registration system
  - promotion of competitiveness of ECEC-related service industry.

## Improving Parental Capacity for Supporting Children's Happiness

HyeJin Jang  
Jeongrim Lee  
Eunju Yun  
Haein Kim

### Purpose

- The purpose of this study was threefold: (1) to extract the indicators of parental capacity supporting children's happiness from examining national and international indices; (2) to develop a self-checklist for parents (one for parents of infants and one for parents of toddlers) that parents can examine their capabilities; and (3) to identify current status of parental capacity.

### Methods

- Data was collected from literature review, parent survey, and interviews. Literature on international index (e.g., OECD well-being, UNICEF Children's welfare, International survey of children's well-being, and Korean children's key index) was reviewed. Interviews were conducted with nine parents with young children, six teachers working in kindergarten and daycare centers, and four classes of children. Also, 48 professionals who are majored in related disciplines (e.g., early childhood education, child care, counseling and social welfare) were participated in the opinion polling to select appropriate questions for the self-checklist. Lastly, by using the developed checklist, the survey targeting 1,000 parents (580 mothers and 420 fathers) was conducted to identify the current status of parental capacity in terms of supporting children's happiness.

### Results

#### Content Development Based on the Examination of International Indexes on Child Well-being

- The checklist contained 68 items (including 16 items about family relationship) in seven domains: Child Development, Health & Safety, Family Relationship, Physical and Material Environment, Play, Guidance of Life, Community Engagement. The first five domains were extracted from international indexes, and the last two domains were added. The checklist items were designed to examine the nature of parental capacity using 3 character traits: Cognitive, Executive, and Potential capacity.

### Parental Capacity to Support Children's Happiness

- Among the seven domains examined, parents scored the highest in the domains of Child Development and Health & Safety (each 4.1 points) and the lowest in Community engagement and Guidance of Life (each 3.8 points).
- Overall, mothers' scores were higher than those of the fathers, and the capacities of parents who are under 34 years recorded relatively higher score than parents who are over 34 years old.
- While not statistically significant, family income (high, average, low) was positively related to parental capacity for supporting children's happiness.
- In the domains of Child development and Guidance of Life, educational background was positively associated with their parental capacity.
- Parents scored the highest in cognitive capacity (except for the domains of Health & Safety and Community Engagement). Executive capacity was the highest in the domain of Health & Safety; and potential capacity was the highest in the domain of Community Engagement.

### Implications

- Distribute the self-checklist to various organizations that serve parents; encourage parents to self-examine their parental capacity and to reflect on it.
- Expand subjects of parent education and increase the accessibility of parents by providing parent education services at various locations where parents can access easily.
- Improve the quality of parent education by creating a support system for parent education, through which instructor support and the sharing of instructor pool (across regions) are facilitated.
- Increase parents' responsibility for child-rearing and provide fathers with more opportunities to participate in parent education programs.
- In pursuit of parents' happiness (which are closely related to their children's happiness), improve working conditions (so that they can balance family and work), and provide more options for quality ECEC services.

## Analysis of Current Trends and Issues of Early Childhood Education and Care Policies in Advanced Countries

Mugyeong Moon  
Peter Moss  
John Bennett  
Minkyung Ha

### Purpose

- The study intended to review and analyze trends and issues of early childhood education and care (henceforth, ECEC) policies in advanced countries and to draw implications for Korea in the planning and implementation of ECEC policies. Furthermore, it aimed at providing prospects for the field and developing pertinent policy agenda.

### Methods

- A range of up-to-date ECEC policy information was gathered through experts in selected countries. In addition, a questionnaire survey was conducted with central and local government officials in Korea regarding their use of and needs for policy information in other countries.

### Results

#### ECEC policy trends in advanced countries

- Overall goal of ECEC policy: securing equality, public responsibility, and public investment.
- Recent policy goals for quality improvement: curriculum and learning standard, pedagogy, qualification of teachers, and teacher education.
- Curriculum for children over 3 years old exists, and in countries where ECEC is split different curricular for different ages are implemented. In Finland, in particular, child-specific curriculum is implemented through close collaboration between parents and teachers.
- Teacher qualification varies, and kindergarten and preschool teachers' qualification is higher

than that of childcare teachers, and is treated better in most of countries.

- European countries focus on in-service teacher training to enhance teacher professionalism, and strengthen accountabilities and competences of teachers through team approach.
- Quality monitoring system is established at the central and local government level for continuous quality improvement and monitoring results are open to public, and are linked to financial supports.

#### Results of survey with Korean government officials on their utilization of and needs for information on recent ECEC policies in advanced countries

- Korean government officials use information on ECEC policy in other countries in their policy formulation, to understand where Korea stands among advanced countries and to solve current challenges of ECEC policy.
- Information on overseas ECEC policy trends is useful to the government officials; but they pointed out the lack of in-depth information on specific policies as well as lack of time and manpower to search such information as the most poignant challenges.

### Implications

- A balance between education welfare and social welfare needs to be considered, and policy goals need to be established to enhance quality of services in order to guarantee equality in development and learning outcomes of young children.
- In particular, provide opportunities for disadvantaged children (e.g., those from low-income or multicultural families, and with special needs) to use services and ensure its quality.
- In Korea, in-service teacher training is relatively overlooked because the focus tends to be on initial teacher training curriculum and teacher qualifications. To strengthen in-service teacher training, evaluation on the effects of teacher training needs to be placed.

## Child Care Support System for Vulnerable Households : Focusing on Multicultural Families

Myung-Lim Chang  
Mi Kyung Kwon  
Hyejin Kim  
Yo-Eun Kong

### Purpose

- Multicultural families are increasing at a fast speed. As the Year 5 project of the “Research on an Integrated Support System for Child-rearing of the Socially Vulnerable”, this study was to understand multicultural families’ childrearing practices and their use of (and demands for) childcare services. The study aimed to provide measures to support childcare of multicultural families, in line with current government-led projects.

### Methods

- Data was collected from literature research, interviews with the mothers of multi-cultural families (n=530) and those of non-multicultural families (n=428) whose children attend kindergartens or childcare centers, and advisory meetings with experts. Multicultural families’ childrearing environment, childrearing practices, childrearing status, and demands for childcare support were examined.

### Results

#### Utilizing available programs to support multicultural families and ways to utilize the programs

- Ways to utilize existing support programs and materials were discussed. For example, current version of “KICCE Parent Education Handbook” and “Training for Understanding Multi-cultural Families in Early Childhood” will need to be revised and supplemented.

#### Measures to support childrearing in multicultural families

- The following suggestions were identified: Fruitful operation of Nuri Curriculum for children ages 3-5 in kindergartens and childcare centers, multicultural education programs for children

- ages 3-5, joint programs with multicultural and non-multicultural parents, tailored support to enhance the capacity of the parents according to family type, teacher training for the improvement of understanding of multicultural families, and collaboration with related organizations.
- A model for establishing a collaborative network among childcare centers serving multicultural families was suggested.

### Implications

- Establish a set of support policies to improve awareness on multicultural families, and to help the immigrant mothers to adapt to the Korean society and raise self-respect.
- Provide additional financial assistance to multicultural children attending childcare institutions
- Establish and operate a website that offers comprehensive childrearing information to multicultural families and children
- Strengthen in-service teacher training programs by providing standardized training programs for teachers to better understand multicultural families and to improve their professional knowledge and skills in serving multicultural families.
- Devise ways to support childcare institutions and teachers to connect and collaborate with community organizations and experts that also provide services to multicultural families.



## The Usage Status of Cultural Infrastructure for Young Children and Its Support Policies

Yun-Jin Lee  
Jeong-won Lee  
Ja Yeun Koo

### Purpose

- The incumbent administration proposed a policy to bridge the cultural gap between income classes, regions, and generations, and to expand customized cultural welfare. This study empirically investigated whether there were differences in the usage of cultural infrastructure for young children by income levels, and, according to the results, suggested a few feasible supportive policies that will increase the usage.

### Methods

- Parents of young children (n=1,000) and directors of childcare centers/kindergartens (n=500) were surveyed. In order to analyze the difference in usage (by income levels), low-income families were oversampled. The final subjects were 782 families with an average gross income and 218 families with a low level of gross income.

### Results

#### Using cultural infrastructure by household income

- Parents and children of families with low income used public libraries, museums and galleries less frequently than families with an average income.
- Low-income families showed a low rate of using cultural facilities that are exclusively for young children or private facilities.

#### The trend of cultural infrastructure use in early childhood

- Regardless of household income, vast majority of respondents reported that their children rarely used cultural facilities other than such places as nearby playground (95.3%), amusement park (70.5%), and aquarium/zoo/botanical garden (62.2%). Parents wanted their children to use cul-

tural facilities more often through kindergartens and childcare centers.

- The most frequently used (more than 4 times per month: 77.4%) and representative cultural facility for young children was local playground. Visiting playgrounds started at the earliest age (before age 1: 73.6%).
- Parents expected for a children's library near their neighborhood the most.

#### Current status of cultural facility use in kindergartens and childcare centers

- Non-usage rate of cultural facilities in last year in childcare institutions was only 4.2%. The most common facility available around childcare institutions was playground, and a reason for non-use was a lack of cultural facilities that are easy to access.

#### Support strategies for cultural infrastructure use

- Provision of culture voucher and mobile cultural services to low income families.
- Promotion of and expansion of current facilities, an increase in new facilities, and expansion of subsidies for low income families
- Development of a larger number of customized cultural facilities for families.
- Establish at least one children's library in each unit of city and province, considering the number of young children and their accessibility.

### Implications

- The findings of this study suggest the promotion of and expansion of current facilities, an increase in new facilities, expansion of subsidies for low-income families, and the provision of a larger number of mobile facilities for families. As for childcare centers and kindergartens, provision of subsidies for group visits of these facilities, the development of children's programs, and the establishment of a partnership between childcare centers/kindergartens and cultural facilities are suggested.
- In addition, the provision of regulations allowing the establishments of diverse cultural infrastructure for infants and young children is proposed.

## Achievements of the Childcare Policy in 2013 and Future Tasks

Moon-hee Suh  
Hye Min Lee

### Purpose

- The purpose of this study was to review the childcare policies of the central and local governments in 2013. Specifically, the research examined the current status and issues of budget-based projects including childcare facility supply, government subsidies to childcare centers, service quality management, and childrearing benefits for families that do not utilize childcare centers or preschools. It proposes major policy tasks to be addressed and future directions for childcare policy.

### Methods

- Data was collected from a policy review, document analysis, and a survey. Parents who are beneficiaries of childcare subsidies (n= 2,000) participated in the survey.

### Results

#### Review of the 2013 childcare policies

- In the year 2013, free childcare had been achieved full childcare cost subsidy for all ages and classes. Teacher allowance increased a bit, but there was no notable change in the establishment of government/public childcare centers, support for alternative teachers, and diversification of childcare.
- The proportion of the childcare subsidy to the nation's GDP accounted for 0.325% in 2013. Total expenditure on childcare was at 0.65% of GDP. When early childhood education-related expenses were included, total childcare-related expenditure was at 0.9% of GDP.
- Childcare center utilization rate was 52.8%, which was an increase from the rate in 2012. Utilization rate for government/public childcare centers was 10.1%: there was no significant change in comparison to the rate in 2012.
- As of April 2013, 85.1% of childcare centers passed the evaluation and certification process. However, less than 70% of childcare programs remained in the pool of certified programs.

- Allowance for teachers of infant class increased to 120,000 won (about \$120), but there was no change in the number of substitute teachers (less than 500 people).

#### Expansion of government-approved childcare centers (1000 centers were approved as an alternative to public or government-funded childcare centers)

- Three quarters of experts said that government-approved childcare centers could replace government/public childcare centers. Parental satisfaction rate of government-approved childcare center parents was similar to that of government/public childcare center parents; however, their satisfaction rate was lower on the quality of meals and snacks. Also, the number of extracurricular activities was relatively higher in government-approved childcare centers.
- Standards for government-approved childcare centers were improved in comparison to the beginning, and follow-up management system was reinforced. However, the level of government support for these approved centers was still low. It is necessary to strengthen the standards for designation and to improve the level of financial support, thus enforcing the public accountability of these government-approved childcare centers.
- Childrearing allowance was mostly given to children ages 0-3 (86.5%), and only 13.5% of total went to children ages 4-5. Among the 0-3 age groups, the allowance went to children younger than 12 months (46.0%), younger than 24 months (30.2%), and 24 months to 36 months (10.3%).
- Initial satisfaction rate (for the amount of childrearing allowance) was 56.2%. The majority of parents used the childrearing allowance for designated (i.e., childrearing) purposes. Proposals to switch cash subsidies to vouchers were disapproved by 85.5% of the parents.

### Implications

- The younger the child was the proportion of lower income families was larger. Parents who quit their jobs after receiving the subsidies were 14.7% and those who worked lesser hours were 3.2%. Parents with children under 1 who quit their jobs were 22.7% and 5.9% reduced their work, which still shows the possibility of childrearing subsidies affecting the employment of mothers. This calls for responsive measures in executing future policies.

## Outcomes of the Early Childhood Education Policy in 2013 and Future Tasks

Eun-Young Choi  
Jeong Sook Kim  
Shinyeong Song

### Purpose

- This study examined the current status and changes of the early childhood education (ECE) policy in 2013. The study aimed to understand the changes and improvements after the implementation of national curriculum for 5 year olds and present future directions for the ECE policy in Korea.

### Methods

- Data was collected through a literature review, interviews, surveys, and professional advisory meetings.

### Results

#### Review of ECE policies in 2013 based on the analysis of 2012 and 2013 budget data

- The number of public kindergartens in large cities was significantly low, requiring a plan to meet the needs of the parents living in those areas.
- Current level of funding support for private kindergartens should be increased more. Private kindergartens' accountability needs to be improved by the use of kindergarten management committees and the kindergarten information disclosure system.
- After-school program courses should be improved to meet the needs of the working mothers.
- Quality improvement of kindergarten evaluation system, and connecting the result with financial supports, linking it with the amount of support need to be reviewed.

#### Analysis of ECE policies/projects initiated by local/regional governments in 2013

- Continuous monitoring of the ECE projects is needed to determine the projects that should be

expanded, reduced, changed or halted.

- Concentration on carefully selected policies is needed through examining collected opinions of policy experts and beneficiaries.

#### Analysis on the current status and adequacy of the Kindergarten Information Disclosure policy

- In order to successfully implement the Kindergarten Information Disclosure System, the items on the disclosure list should be reduced. The timing requirements for disclosure should be readjusted, and manuals should be distributed.
- For verification of the disclosed information, a monitoring team should be organized, and an internal verification and correction system should be provided.

### Implications

- Continuously monitor the implementation status of current policies, focusing on carefully selected set of coherent policies
- Encourage stakeholders (including experts and beneficiaries) to work collaboratively to determine next steps for improving ECE policy in Korea.

## A Pilot Study on the Cooperation Model of Early Childhood Education and Childcare in Korea (Year 5): Focusing on Operative Cooperation of the “Nuri Curriculum for Ages 3 to 5”

Mi Kyung Kwon  
Yun-Jin Lee  
A Ra Cho

### Purpose

- Under the split system of early childhood education and childcare (henceforth, ECEC), substantial attention has been given to the ways service providers from each sector collaborate. Since 2009, Korean government has paid attention to develop a cooperation model between the early childhood education sector (e.g., kindergartens) and childcare sector (e.g., childcare centers), and to apply the model to practice. The 6-year Integration Model Project (2009-2014) is in its fifth year. Expanding pilot areas to cover all areas of country (16 municipal/regional governments), the project’s focus for this year was on strengthening the collaboration between the two ECEC sectors with regard to implementing the “Nuri Curriculum for ages 3-5”, as a common curriculum for all kinds of ECEC institutions in Korea. This study aimed to examine the progress of the Integration Model Project focusing on progress from Year 1 to Year 5, identify unique strengths of each sector and expectations (and needs) of stakeholders, present an Integration model for implementing the national common curriculum for preschoolers (ages 3-5), and propose directions for the final year (Year 6) of the Integration Model Project.

### Methods

- Pilot centers (n= 57) were selected from each area/region of the country. Selected kindergartens (n=28) and childcare centers (n=29) were examined, with a specific focus on implementation of the Nuri Curriculum and collaboration of managing institutions, facilities, teaching materials, teachers, and budget planning. Pre- and post-collaboration surveys and interviews were conducted. Directors and teachers in the 57 pilot ECEC institutions (n=342) and support system staff (n=41) completed pre-collaboration survey. Post-collaboration survey was completed by directors and teachers in the pilot institutions (n= 503), support system staff (n=20), and parents (n=1,006).

### Results

#### Analysis on the achievements from Year 1- Year

- The number of participating pilot centers has been increased from 14 to 44 centers from Year 1 to Year 4.
- In terms of collaboration areas, “collaboration among teaching staff” was most active. In Year 4, due to implementation of common curriculum, “collaboration around curriculum” was the highest ranked area among content collaboration areas.
- Parent satisfaction rate was high (ranging from 76.7 to 84.3%).
- Support system staff identified “qualify improvement of ECEC services” as the most successful aspect of the Integration Model Project.

#### Analysis on the achievements of Year 5

- In Year 5, “collaboration among teaching staff” received the highest score and “collaboration around ECEC program operation” received the lowest score.
- In terms of the effect of collaboration, existing pilot centers received higher scores than new pilot centers in all examined areas (except for “Collaboration in Budget Planning” area).
- In terms of implementation of common curriculum, collaboration among programs resulted in reduced expenses (e.g., in developing curriculum guidelines, preparing instructional materials, and in planning for field trips and extension activities) and reduced pressure on teaching staff.

#### Participants’ Perceptions and Needs

- Directors and teachers reported the following:
  - Collaboration around the operation of the common curriculum and among teaching staff were most active
  - Enhanced understanding of other ECEC programs was achieved
  - The most difficult aspect was making time for meetings (34.7%); on-line café and smart-

- phone applications were used to address this issue.
- Sharing information through the website created by the Korean Institute of Child Care and Education (KICCE), and instructional resources developed/provided by support organizations were instrumental in facilitating collaboration
  - Parents reported the following:
    - Kindergartens and childcare centers are different, especially in terms of curriculum
    - Collaboration between kindergartens and childcare centers are necessary
    - Satisfied with the collaboration (64.7%)
    - Improvement in terms of “education and care program” is noticeable
  - Support system staff reported the following:
    - Collaboration between kindergartens and childcare centers resulted in improved quality of ECEC services
    - In order to facilitate further collaboration, increased attention and support from central government is necessary

### Implications

- Pilot study in the year of 2013 applied accumulated results into practice. This was for encouraging mutual cooperation of both sectors, improving the quality of their cooperation, and sharing hands-on expertise.
  - To propose progress plan for the sixth year based on the above results, it is necessary to promote active interaction between pilot institutions, related organization and stakeholders under the lead of local governments.
  - For the discussion of overall agenda of institutional operation, municipal government needs

- to form an atmosphere where pilot institutions can cooperate on a voluntary basis as partners in local community.
- Budget securing is the foremost need for voluntary cooperation. Support strategies (e.g., development and dissemination of operation manual) need to be devised.

## A Study on the Measures to Support Childbirth and Rearing for Families with Late Childbirths

Jeong-won Lee  
Haemi Yoo  
Moonjeong Kim

### Purpose

- Childbirth in late pregnancy has become one of the major familiar changes that influence child-birth plans and childrearing environment. In response to late childbirth trend in Korea, this study aims to suggest support measures for the families with late childbirth.

### Methods

- Data was collected from 1,000 households with one preschooler. Among them, 300 were from families having their first child when the mothers were after 35; from this group 15 families participated in in-depth interviews.

### Results

#### Conditions and problems of current policies addressing the issue of late childbirth

- The percentage of mothers who have their first child at the age of 35 or older has sharply increased from 1.3% in the 90's to 10.7% in 2011, showing a clear trend of late child bearing.
- As most childrearing policies are about provision of universal support for all families regardless of unique needs, the lack of consideration for the late childbearing is pointed out as a major problem. In the cases of having trouble conceiving, there is even discrimination depending on mothers' age. Given that the average age of woman having first child continues to rise, the problem can be worse.

#### Current status of child birth and rearing in families having their first child at older ages

- The main causes of late childbirth were late marriages and difficulty in conception.
- Mothers having their first child in late pregnancy require aggressive child care supports since

they face more difficulties in pregnancy, maintaining pregnancy, healthy child birth, and child-rearing compared to families having their first child at younger ages.

- Although mothers having their first child later in life have faced the above mentioned difficulties, the advantage of late childbirth are also reported.
- Mothers having their first child at older ages have more experiences of career interruption because of the fertility problem, and more difficulties in getting child care supports from grandparents, compared to families having their first child at younger ages.
- Families having their first child at older ages have significantly less plans for more child birth, and more burdens in preparing for life after retirement, and child-rearing at the same time. Therefore, the necessity to support them to ease their burdens by strengthening social support system for childrearing is suggested.

### Implications

- Expand the beneficiary of housing support project on newly married couples in order to prevent late marriage.
- Remove the clauses of both 'legal marriage registration' and 'females under 44 years of age' from beneficiary selection criteria for pregnancy support service and include the assisted reproductive technology in the health insurance coverage.
- Conduct educational programs and examinations on reproductive health for younger students as part of preventive care
- Improve social support system for childrearing, and increase paternal participation in child care.
- Grant leave for fertility treatment to prevent women's carrier interruption by infertility
- Introduce child allowance to support families having their first child at older ages to ease the financial burden after the parents' retirement.

## Father's Participation in Childrearing: Current Status and Support Strategies for Family-Work Balance

Haemi Yoo  
JooYoung Jung  
Yujin Yang

### Purpose

- As Korean parents today put considerable emphasis on work-family balance, the government has implemented various measures to support working mothers in response. Mothers, however, still take weighty responsibilities for childrearing. In such circumstances, fathers' involvement in childrearing has drawn a substantial attention in that it can effectively benefit their children's development and co-parenting relationship with their wives or partners, helping achieve gender equity in family. This study aimed to provide practical support measures based on the explicit understanding of what fathers want and need; ultimately leading more fathers to active participation in child-rearing.

### Methods

- Data was collected from literature review, surveys, and in-depth interviews. First, the literature was reviewed in terms of current status of fathers' involvement in Korea and examined closely related laws and policies. Second, a survey was conducted with fathers of young children (n=1,083), Healthy Family Support Center staff (n=108), and Childcare Information Center managers (n=50). Third, in-depth interviews were conducted with fathers with young children (n=7), business staff who are in charge of family-friendly workplace policies in companies (n=4), and practitioners who provide childrearing support services to fathers (n=7).

### Results

#### Child-rearing support program for fathers

- Ministry of Gender Equality and Family offers various father involvement programs such as father education courses, Saturday father-child programs, and family programs, showing sub-

stantial amount of attention on father's caring for a child (52,663, 23,247, and 72,747 participants respectively, in 2012)

- Responses from service agency staff showed that: 1) fatherhood education programs can be most effectively conducted in companies (due to easy access to fathers, necessity for company's participation and support, and opportunity to form family-friendly policies); 2) hands-on participation programs for fathers can be most effective when conducted by the early childhood institutional settings; 3) fatherhood education programs can be most effective for fathers of preschoolers, and experiential programs can be most effective for fathers of infants.
- Among company's family-friendly policies, paternity leave was mostly used. Paternity leave policy was more commonly available in large corporations, but less common in construction and service industries. More than half of businesses (54%), and the majority of construction companies (71%), did not offer parental leave.

#### Fathers' involvement in childrearing

- Wives were mostly in charge of day-to-day care, such as a bathing and education.
- Major difficulties in child-rearing included long hours of work and a lack of family-friendly system. Only 33.9% said they are striking work-family balance; and most of these respondents were working in family-friendly corporations.
- Among company's family-friendly policies, paternity leave was mostly used, and it was more common in large corporations, but less common in construction and service industries.
- Respondents said following systems were helpful for child-rearing: "Go Home On Time" policy (20.6%), "Work at Home" system (15.6%), "Staggered Working Hours" system (14.4%), and parental leaves (12.1%)
- In terms of appropriate length of parental leave, the majority of fathers chose 10-14 days.

### Implications

- Set the basic premise for paternal child-care support policy.
- Establish a department responsible for the execution of such plans by providing relevant information and promoting related programs.
- Reinforce and approve family-friendly systems in companies.
- Set family-friendly workplace plans and assign human resources to manage these programs
- Provide education to school-aged children to change societal (stereotypical) views on gender roles and to promote gender equity
- Actively involve early childhood institutions to provide quality parent education programs and engage fathers in childrearing.
- Strengthen infrastructure for providing the above services more effectively

## Ensuring quality implementation of the “Nuri Curriculum for Age 5”

Eun-Young Choi  
Yoon Kyung Choi  
Kyoung-Jin Lee  
Eun-Kyung Shin

### Purpose

- The purpose of this study was to analyze the current status and problems of the Nuri Curriculum (the common curriculum for preschoolers in Korea) from the perspectives of institutions, teachers, and parents. In addition, the study seeks to develop a common index for kindergartens and child care centers to efficiently implement the “Nuri Curriculum for Age 5”.

### Methods

- Data was collected from literature review, interviews, and surveys. Interviews were conducted with early childhood program directors (n=4), teachers of children ages 3-5 (n=12), and parents of young children ages 3-5 (n=12). Surveys were completed by a total of 3,947 participants, including kindergarten directors (n=447), childcare center directors (n=500), parents of the institutions (n=500), and teachers at kindergartens (n=500) and at childcare centers (n=500).

### Results

#### Current implementation status of the Nuri Curriculum in kindergartens and childcare centers

- Perspectives of directors of kindergartens and child care centers:
  - The most distinguished feature of Nuri Curriculum is that all children can receive the same high quality services.
  - Institutions have emphasized creativity and character education more.



- Challenges for teachers:
  - Class preparation and the lack of teachers were the most challenging obstacles.
  - Content-based group training is needed for teachers from both kindergartens and childcare centers

#### Perceptions and demands of parents:

- Parents were satisfied with the standardized content for supporting preschoolers regardless of early childhood settings; however, childcare center parents were dissatisfied with a lack of public announcements regarding the Nuri Curriculum
- Nuri Curriculum's focus on creativity and character-education, along with reduced tuition, was noticed as major changes

#### Suggestions for establishing a system for quality control of Nuri Curriculum operation

- Respondents identified the need to stress more intensive and detailed integration of existing early childhood institutions or to establish a single organization taking charge of ensuring quality of Nuri Curriculum.
- Based on this opinion, two policy options for quality control system (i.e., collaborative vs. integrated) were suggested.

#### Development of common index for evaluation

- Based on common indices between kindergarten evaluation and child care accreditation centers in Korea, and based on the analysis of evaluation indicators of other countries, a draft of common index for early childhood programs was developed.

### Implications

- Provide financial support to improve physical environment of early childhood programs
- Offer training opportunities to improve professionalism of administrators

- Strengthen the link with families and communities by facilitating systems for parent involvement
- Advance in-service training systems by focusing on effective content/materials and by expanding opportunities for teachers to get more training with other teachers in the same community/region
- Improve the evaluation systems of early childhood centers by reducing the number of indicators for kindergartens evaluation and differentiating the indices for child care center accreditation.
- Link evaluation system to consulting/supervision system to ensure continued improvement in the quality of early childhood program services

## Evaluating the Effect of the “Nuri Curriculum for Age 5” using a Child Observation Rating Scale

Jeongrim Lee  
Meehwa Lee  
Yu Jeong Oh

### Purpose

- Nuri curriculum (common curriculum for all preschoolers in Korea) has been implemented since 2012 to provide opportunities for young children to have a fair start in life. The purpose of this study is to examine the effect of the “Nuri Curriculum for Age 5” using a Child Observation Rating Scale.

### Methods

- To collect data for this study, 500 kindergartens and 500 childcare centers were selected using stratified random sampling strategy. From each selected center, one teacher (per unit of 50 students) in charge of a 5-year old class was asked to evaluate two randomly selected children (1 boy and 1 girl) and to complete pre- and post-tests using the Child Observation Rating Scale for each child. Data on teachers (493 in kindergartens and 370 in childcare centers) and young children (904 in kindergartens and 709 in childcare centers) were collected from the final pool of 313 kindergartens and 364 childcare centers. Data on child development and behavior outcomes were collected along with information on children’s socio-demographic status, types of ECEC service providers, and teacher-factors. Data were analyzed using two-way ANOVA with repeated measures.

### Results

#### Development and Behavioral Characteristics of Young Children

- With the implementation of Nuri curriculum Age 5, young children from families with more risk factors showed more progress in terms of development and performance.
- In the area of art experience, the gap still existed depending on income level, family type (e.g., multicultural families), and the occupation of mothers (e.g., mothers with professional jobs).

- In terms of teachers’ ability to understand and implement the common curriculum, teachers with college degrees showed better ability than those with high school diplomas.
- In all five areas of Nuri Curriculum, children in classes for 5-year olds recorded higher scores than those in mixed-age classes.

### Implications

- Facilitate ways for young children from families with more risk factors to benefit from the Nuri Curriculum
- Promote the Nuri curriculum and conduct a longitudinal study for examining medium and long-term effects of the Nuri curriculum
- Ensure over 4 year of teacher preparation system
- Encourage early childhood institutions to run a class for 5-year olds, offering guidelines for mixed-age classes to implement “Nuri Curriculum for Age 5”.
- Provide more training options and opportunities for teachers to better understand and utilize Nuri Curriculum

## The Effect of the “Nuri Curriculum for Age 5”: Focusing on Elementary School Adjustment

HyeJin Jang  
Eunseol Kim  
Kyounga Sang  
Shinyeong Song

### Purpose

- Nuri Curriculum for Age 5 considered the articulation with elementary school curriculum from the development stage of Nuri-curriculum to strengthen the articulation between a kindergarten/child care center and an elementary school. To monitor and support a more effective operation of Nuri Curriculum for Age 5, a research for analyzing the impact of Nuri Curriculum for Age 5 was necessary. Given the importance of smooth transition of young children from early childhood programs to elementary schools, Nuri Curriculum for Age 5 considered the articulation with elementary school curriculum from the development stage.
- The purpose of this study was to identify if there is a difference in children’s school adjustment depending on their experience (or the absence) of Nuri Curriculum, and if there is any institutional or teacher variable affecting a child’s school adjustment. It is expected that the findings of the study will provide essential information to find a way to improve operation quality of Nuri Curriculum, especially in terms of supporting children’s school adjustment.

### Methods

- Data was collected from elementary teacher evaluations of children in Grade 1 (n=1,744), surveys completed by elementary parents of children in Grade 1 (n= 1,969) and teachers in kindergartens and childcare centers (n=311), and in-depth interviews with teachers from elementary schools, kindergartens, and childcare centers (n=11). Meeting minutes from advisory council meetings and policy seminars were also used to inform policy recommendations.

### Results

- There was no difference in their elementary school adjustment between two groups of children

- (Nuri Curriculum Group and Comparison Group). However, the positive effect of Nuri Curriculum was identified for a group of children from disadvantaged backgrounds such as those living in a rural area, whose parents with lower levels of educational attainment, or whose parents with serious depression issues.
- Children’s school adjustment was different depending on their gender, size of residential space, family income, and parental academic background.
  - Average score of school adjustment was 3.86 (out of 5). The scores of “relationship with teacher” (4.07) were the highest, and “daily school life” (3.98), “academic activity” (3.84), and “relationship with friends” (3.56) followed. It was “relationship with friends” that required mores support for children’s school adjustment.
  - In all 4 areas, girls’ school adjustment was better than that of boys’.
  - The higher the income level of parents, the higher the school adjustment score of children.
  - Children living in large cities received the highest school adjustment scores, followed by those in small and medium cities, and those from rural areas.
  - The higher the depression levels of parents, the lower the school adjustment scores of children.
  - Among institution and teacher variables, age-separated classes (in comparison to mixed age classes) and teachers with at least a four-year college degree were identified as the statistically meaningful variables affecting children’s school adjustment.

### Implications

- Short-term plans to improve the quality of Nuri Curriculum operation:
  - Expand the opportunities for children to participate and experience Nuri Curriculum
  - Support children’s positive peer relations
  - Offer targeted teacher training for effective implementation of Nuri Curriculum
  - Inform the public about Nuri Curriculum, and provide parent education
- Medium-term plans to improve the quality of Nuri Curriculum operation:

- Raise the bar for minimum teacher qualification
- Encourage age-separated classes
- Inform the public about the disadvantages of parent depression that may negatively affect children's school adjustment
- To support children's school adjustment and enhanced articulation between the early childhood and elementary settings, the following policy directions were suggested:
  - Implement diverse activities that support young children's adjustment to elementary school
  - Focus on building home-school relations
  - Enhance the articulation components/activities in implementing Nuri Curriculum
  - Build a system for cooperation between kindergarten/child care centers and elementary schools
  - Reinforce the role of elementary schools as an agency to support children who struggle in terms of academic performance and school adjustment
  - Conduct more research with diverse methodologies to support effective implementation and utilization of Nuri-Curriculum.

## Evaluating and Monitoring the Effectiveness of the Nuri Curriculum for Ages 3 and 4: The Development of a Child Observation Rating Scale

Meehwa Lee, JooYoung Jung, Ji-won Eom, Hi-Jeong Kim, Myoung Soon Kim, Kyung-Ok Lee, Wan Jeong Lee, Jeongwuk Lee, Il Sun Choi, Hye-Yeong Choi

### Purpose

- The purpose of this study was to develop a child observation scale for the Nuri Curriculum for Ages 3 and 4. By developing and utilizing the assessment scale, this study aimed to understand the diversity of development of young children ages 3 and 4, and to examine children's achievement in meeting the goals of Nuri Curriculum in each of the five developmental domains. In addition, the project aimed to develop a guidebook for teachers to utilize the child observation rating scale.

### Methods

- Literature review on child assessment scales, curriculum evaluation, and related research were conducted. A child observation rating scale was developed and a pilot test was conducted with kindergarten and childcare center teachers (n= 94) of young children ages 3 and 4 (n=188). Validity and reliability of the assessment scale were confirmed. Main study was conducted with a national sample of early childhood teachers (n=1,016) reporting on children ages 3 and 4 (n=2,032).

### Results

#### Development of a Child Observation Rating Scale for the Nuri Curriculum for Ages 3 and 4

- Based on the Child Observation Rating Scale for the Nuri Curriculum for Age 5 developed in 2012, a Child Observation Rating Scale for each group of Age 3 and Age 4 was developed.
- The effectiveness of the Nuri Curriculum was assessed based on children's performance measured with the Child Observation Scale.
- The Child Observation Scale for 3-year-olds contained 63 items (physical exercise and health

- 15, social relations - 12, communication - 10, nature exploration - 13, and art experience - 12).
- The Child Observation Scale for 4-year-olds contained 67 items (physical exercise and health - 15, social relations - 14, communication - 12, nature exploration - 14, and art experience - 12).

#### Process of Developing the Child Observation Rating Scale

- Purpose and direction of child assessment were examined
- Previous research on Nuri Curriculum for Ages 3-5 was reviewed
- Scope and sequence of Nuri Curriculum for each age group were examined
- Considering the child assessment scale for 5-year olds developed in the previous year, proper range of performance standards in each domain was established for each age group
- A group of 13 early childhood program administrators and teachers participated in developing observation case examples accompanying the items in the Child Observation Scale.
- Child Observation Rating Scale for Age 3 and the Scale for Age 4 were developed and tested
- A Teacher's Guide for using the Child Observation Rating Scale was developed
- Advisory meetings and policy seminars were held during the planning, designing, and reviewing stages of the Child Observation Rating Scale development

#### Preliminary and Main Investigation to Verify the Validity and Reliability

- In Seoul, 94 teachers of age 3 and 4 classes (188 children ages 3 and 4 in kindergartens and childcare centers participated in preliminary investigation.
- Nationwide, 1,016 teachers of age 3 and 4 classes (2,032 children ages 3 and 4) in kindergartens and childcare centers participated in main investigation.

- To evaluate the progress and effectiveness of implementation of the Nuri Curriculum, and to support practitioners (e.g., administrators and teachers) in the field as well as children in early

childhood programs, government support in the following areas is essential:

- Personnel support for the execution of the Child Observation Rating Scale
- Physical and environmental support for the operation of Nuri Curriculum
- Consulting for the evaluation of Nuri Curriculum
- Continuous evaluation and R&D for Nuri Curriculum
- Pre-service and in-service training programs targeting child observation/ assessment and curriculum implementation
- Development of a short form of the child assessment scale
- Dissemination of information through establishing a website on the Child Observation Scale

## Current Status of the Operation and Use of the “Nuri Curriculum for Ages 3–4” and Suggestions for Improvement

Mi Kyung Kwon  
Jeong Sook Kim  
Kyung jin Lee  
Hyun sil Jang

### Purpose

- Since 2013, Nuri Curriculum, the common core curriculum for children ages 3–5 in Korea, has been implemented in early childhood programs across the nation. The purpose of this study was to investigate the current implementation status and use of the Nuri Curriculum in kindergartens and childcare centers.

### Methods

- Data was collected from surveys and interviews. A survey was completed by directors of kindergartens and childcare centers (n=1,023), early childhood teachers of three to five year old classes and mixed-age classes (n=2,593), and parents with children ages three to five (n=3,059). In-depth interviews were conducted with directors (n=4), teachers (n=4), and parents (n=3).

### Results

#### Current Status of the “Nuri Curriculum for Ages 3–5”: Implementation in the Field

- Application of Nuri Curriculum in early childhood centers, teachers’ use of the Curriculum, and practitioners’ evaluation on the Curriculum and their demands for improvement were examined.
- 85.1% of kindergartens and 87.7% of childcare centers had single age classes
- Early childhood programs operated about 3–5 hours of Nuri Curriculum.
- Early childhood programs had a balanced coverage of all five domains of Nuri Curriculum.
- The majority of kindergarten and childcare center teachers (71.2% and 70%, respectively) reported that, compared to existing ECEC curriculum, Nuri Curriculum emphasized more in the areas of creativity and character education.

- Teachers asked for the development and distribution of various materials for instruction and activities

#### Current Status of the “Nuri Curriculum for Ages 3–5”: Utilization and Demands of Parents

- Survey items included parents’ recognition of Nuri Curriculum, their use of early childhood program services of before and after the implementation of Nuri Curriculum, types of early childhood institutions they used, hours of use, challenges for parents, areas of satisfaction, and demands for improvement.
- About one third of kindergarten and childcare center parents (38.7% and 26.8%, respectively) answered that their children stay for 8 hours in early childhood programs.
- Most parents who send their children to institutions knew about Nuri Curriculum (90%), but were unaware of its details (70%).
- The aspect that parents were most satisfied with the Nuri Curriculum was the tuition support
- Despite the use of common curriculum for all 3–5 year olds regardless of institutions, parents still reported that there was a gap between the curriculum at kindergartens and at childcare centers.

### Implications

- The following policy recommendations were presented as strategies for improving the condition of implementing Nuri curriculum:
  - For early childhood programs: use kindergartens and childcare centers as a path for delivering early childhood policies; share best cases of implementation practices of the Nuri Curriculum through early childhood institutions; and support early childhood institutions to build cooperative relations (e.g., between kindergartens and childcare centers), centered around the operation of Nuri Curriculum
  - For early childhood teachers: provide more opportunities for consulting-supervision system

to improve professional knowledge and skills of childcare center teachers; strengthen teacher qualifications, simplify documentation requirements, provide assistant teachers, develop and distribute instructional materials at a national level, and diversify supporting channels of Nuri Curriculum

- For parents: develop and distribute parental education materials on Nuri Curriculum, examine additional expenses related to using early childhood education and child care services, and propose maximum tuition cost that can be charged to parents (to reduce their financial burdens)
- For policy stakeholders: monitor the status of implementation and use of Nuri Curriculum periodically, and establish common evaluation system

#### Strategies for Improving the Operation and Use of Nuri Curriculum

- For early childhood programs, use kindergarten and childcare center as a delivery path for young children and policy targeting parents, sharing best practices, and building cooperation relations between kindergarten and childcare center, focusing on Nuri Curriculum.
- For teachers, provide more opportunities for childcare center teachers to benefit from Consulting-Supervision System to improve their expertise; strengthen teacher qualifications; reduce administrative works; support associate teachers; develop and distribute materials at a national level; and diversify supporting channel of Nuri Curriculum.
- For parents, develop and distribute materials for Nuri Curriculum PR and for parent education.
- Continuously monitor the operation status of Nuri Curriculum and establish a common evaluation system.

## Estimating the Costs of Using Child Care and Education Services

Misun Yang  
Jinah Park  
ChangGeun Son  
JiHee Im

### Purpose

- The purpose of this research was to estimate total cost of early childhood education and care (ECEC) services and private education per child, and to provide policy recommendations for relieving the financial burden of parents.

### Methods

- National data was collected from 2,519 households with young children ages 0 to 5. Household expenditure on care and education of young children (n=3,630) was examined. In-depth interviews with 19 families were conducted.

### Results

#### Total cost of ECEC services per child per month

- Due to the tuition support policy, about one in five children did not pay tuition as it was fully covered by the government subsidy (18.7%), which was a level similar to 2012.
- Average cost per child was 147,600 won (about \$147), and average payment for children who paid the extra cost (not covered by the government subsidy) was 181,500 won (about \$181), decreased more than 30,000 won (about \$30) compared to previous year.
- Household expenditure on ECEC services per child accounted for about 4-5% of total household income and expenditure (4.3% of total income and 5.3% of total expenditure). In comparison to 2012, which was the year before the implementation of tuition support policy, the average cost per child declined about 1%p (5.1% of total income and 6.6% of total expenditure in 2012).
- The total ECEC cost was 4.9 trillion won (about \$4,900 million), 0.39% of GDP. Compared to 2012, total 1 trillion won (about \$1,000 million, 0.1% p of GDP) was reduced.

#### Household expenditure on ECEC services per month

- About 5% of households did not have to pay tuition for ECEC services (6% in 2012).
- Average ECEC cost for all households was 205,200 won (about \$205).
- Household expenditure on ECEC services accounted for 6.1% of total household income and 7.6% of total household expenditure. In comparison to 2012 (7% and 9.1%, respectively), the average ECEC cost declined about 1% p.
- ECEC cost for households with one child was 179,800 won (about \$179); for those with two children it was 250,200 won (about \$250); and for those with three children, it was 114,500 won (about \$114).

#### Total cost of private education per child per month

- As of June 2013, 68% of children paid for private education. By age group, 46.3% of infants/toddlers and 89.2% of preschoolers (ages 3-5) paid to receive some form of private education.
- Average cost of private education per child was 78,900 won (about \$78). Compared to 2012 survey, there was a slight decrease.
- Total cost on private education was 2.64 trillion won (about \$2,640 million, 0.21% of GDP), showing about 100 billion won (about \$100 million) decrease from 2012.

#### Total cost of private education per household

- About four out of five families with young children paid for private education (82.5%), which was increased about 6% p compared to the previous year.
- The ratio of total private education cost to total household income and expenditure was 3.4% and 4.1%, respectively.
- For all households, average private education cost was 107,800 won (about \$107).
- For the households with one child, average private education cost was 91,200 won (about \$91); for those with two children, the cost was 137,100 won (about \$137); and for those with three children, it was 49,000 won (about \$49).

#### Implications

- Establish criteria for and strengthen monitoring of ECEC programs' extracurricular activities and afterschool programs that have been an extra financial burden for families with young children.
- Effectively implement the Nuri Curriculum and control proliferation of extracurricular activities in ECEC programs or afterschool special activities/programs.
- Manage and monitor activities (e.g., management, tuition, extracurricular activities, and related costs) of private ECEC service providers to reduce unnecessary expenditures for families with young children
- Expand learning voucher system to support children's cognitive development and learning activities, and monitor its use.
- Provide opportunities for parent education to help them improve their understanding and awareness of quality early childhood education and care.



## Improving the Quality of Childcare: Cost Estimation for Providing Quality Childcare Services

Moon-hee Suh  
Misun Yang  
YoungMi Lee  
HyungJin Park  
HeeJung Kim

### Purpose

- The purpose of this research was to estimate total cost of full-day childcare services per child, and to provide policy recommendations for relieving the financial burden of parents.

### Methods

- Data Collection:
  - Data was collected from literature review, document analysis, and surveys. Previous studies on childcare cost were reviewed. National data on childcare centers was collected to examine their itemized income and expenses. Surveys were completed by childcare centers (n=464) regarding their expenses on human resources, administration, facility management, and others.
- Estimating the cost of childcare:
  - To calculate the cost of childcare, items were identified and grouped using a framework for financial accounting.
  - Costs related to “Human Resources” included items such as base salary and employee benefit programs (e.g., pension and insurance). Costs related to “Management and Operation” included items such as travel, utilities, commission charges, transportation, and fuel. Costs related to “Meal, Snack, and Educational materials” included the items in the normative criteria. “Facilities” expenses included costs related to installment and maintenance.
  - When estimating the cost of childcare, the age of the child and the teacher-child ratio were considered in the calculation. Childcare centers were categorized according to the number of enrolled children. Centers were grouped as those accommodating 20 persons, 50 persons, 77 persons, 97 persons, 124 persons, or 156 persons, which is a slightly different criterion from that of financial accountings.

### Results

- Two types of childcare cost scheme (Type 1 and Type 2) were proposed. On personnel expenses there was a difference in the pay level, positional arrangements, and teacher bonuses between the two types. The arrangements of non-homeroom teachers and assistants were also different. In the second type an additional teacher bonus of 200,000 won (about \$200)/month was included. Expenses on the ingredients for meals and snacks were calculated on the basis of an average menu and a premium menu. The costs for teaching materials were differentiated by the amount of stock. Depreciation cost was differentiated by either the standard unit cost of the construction of public childcare centers or that of public offices. The same applied for maintenance and management costs.
- The estimated cost of full-day childcare per child was different depending on the type of cost scheme (i.e., Type 1 vs. Type 2) and age group (i.e., ages 0, 1, 2, 3, and 4-5). In the case of full-day childcare programs serving 50 children for eight hours, the estimated cost per child (by estimation type and age group) was as follows (1000 won is about \$1):
  - Estimated cost using Type 1: age 0 – 901,568 won; age 1 – 636,493 won; age 2 – 510,282 won; age 3 – 392,901 won; and ages 4-5 – 353,805 won.
  - Estimated cost using Type 2: age 0 – 1,005,010 won; age 1 – 720,891 won; age 2 – 586,024 won; age 3 – 462,730 won; and ages 4-5 – 421,187 won.

### Implications

- Establish standards for each item group included in calculating the cost of childcare
- Devise ways to precisely calculate the cost of the items that are used in childcare services (because current financial accounting system does not clearly identify/include some of the expense items frequently used in childcare)
- Consider the differences among total cost of childcare per child, the tuition for childcare services

(paid by families), and the amount of government subsidy for childcare services in developing childcare support policies

- Calculate the cost of childcare for various types of childcare services (e.g., childcare for children with special needs, extended day care, 24-hour care, weekend care, afterschool care, and temporary care services)

## Cost Estimation for Kindergarten Education under the Implementation of Nuri Curriculum

Eunseol Kim  
Mugyeong Moon  
Jinah Park  
Youngmi Lee  
Haein Kim

### Purpose

- Since 2013, along with the implementation of common curriculum for young children (“Nuri Curriculum for Ages 3-5”), all preschoolers in Korea are eligible to receive free early childhood education and care services (including expenses for meals, snacks, and afterschool programs as well as tuition). In this context, it was necessary to examine the cost of early childhood education and care services for children ages 3-5.
- The purpose of this study was to estimate the standard cost of early childhood education in public and private kindergartens. Since parents still pay for extracurricular activities (e.g., field trips), current status of fieldtrips and proper cost were examined.

### Methods

- Data for this study was collected from literature review, document analysis, and surveys. Data on annual expenditure plans of 804 kindergartens (public - 242, private - 562) from the public website on kindergarten information was analyzed. Surveys completed by 950 kindergarten administrators (public - 413, private - 448) were analyzed in terms of financial operation, perceptions on standard cost of early childhood education, and content/cost of afterschool programs.

### Results

#### The cost of kindergarten education per child: Current status

- Based on the Early Childhood Education Act, standard cost of early childhood education included standard cost of the items such as labor, academic activities, facilities, curriculum, and common operation.
- Based on financial plans of kindergartens nationwide in 2013, the cost of early childhood edu-

cation per child in public kindergartens was 3,042,600 won per year, and 253,600 won per month (about \$3,042/year and \$253/month).

- When standard labor cost (average annual salary of kindergarten teachers) per child was added, the cost of education per child in public kindergartens was 6,295,600won/year (about \$6,295/year)
- In metropolitan areas, there was a difference in per-child cost of education depending on the size of kindergartens. The smaller the size was, the higher the per-child education cost was.
- In private kindergartens, per-child cost of education was 5,817,400 won per year, and 484,800 won per month (about \$5,817/year and \$484/month).

#### Estimated standard cost of early childhood education per child

- Based on the standard kindergarten model, the standard cost of kindergarten education was 2.8035 trillion won (about \$2,803 million) for the whole country. Standard cost of public kindergarten education was 817.9 billion won (about \$817 million), and that of private kindergarten education was 1.9856 trillion won (about \$1,985 million).
- Estimated standard cost of kindergarten education per child calculated with the standard number of children in a class (i.e., 20 children) was 5,245,000 won (about \$5,245/year), and 437,000 won (about \$437/month)
- Estimated standard cost of education per child was 5,596,000 won per year in public kindergartens and 5,114,000 won in private kindergartens (about \$5,817 and \$5,114, respectively).
- Estimated standard cost of lunch and snacks per child was about 43,500 won per month (about \$43/month).
- Estimated standard cost of extracurricular activities during afterschool hours was 131,581 won per month (about \$126/month for public and \$135/month for private kindergartens).
- Estimated adequate cost of field trips (based on 20 children in a class) was between 3,046 won and 6,825 won depending on the nature and types of activities (about \$3-\$7).

#### Implications

- Inform public of the standard cost of education per child; help administrators and parents use this information to determine proper tuition level (e.g., for private kindergarten administrators) and to identify affordable early childhood programs (e.g., for parents)
- Reflect reality of private kindergartens (e.g., labor cost and operating budget) in estimating the standard cost of early childhood education per child.
- Consider quality (beyond functional level) of early childhood education when calculating the standard cost of education per child.

## Panel Study on Korean Children (PSKC) 2013

Namhee Do  
Jungwon Min  
Younghee Wang  
Yejin Yi  
So A Kim  
Jimin Uhm

### Purpose

- The Panel Study on Korean Children (PSKC) model (Jang, Shin, & Park, 2006) was developed based on the ecological systems theory. Using the PSKC model, the project team has followed a cohort of 2,150 children born in 2008. Data on the development of children, their family environment, childcare support services, and parents' perception on childcare support policies were collected and examined. PSKC will provide longitudinal and cross-sectional data to enrich the related fields and serve as resources for establishment and improvement of child care policies.

### Methods

- The data was collected through child assessments, computer assisted personal interviews (CAPI) and paper and pencil interviews (PAPI) with parents, and teacher questionnaires (via computer-assisted web interviews). Children were assessed using K-WPPSI (Korean-Wechsler Preschool and Primary Scale of Intelligence), JPPSST (Joseph Pre-School and Primary Self-concept Screening), REVT (Receptive and Expressive Vocabulary Test, REVT).
- Based on the data collected for the past five years (2008-2012), this year's technical analysis was done in six categories; the characteristics of children born in 2008, families, household, childcare support services, local community, and childcare support policies.

### Results

#### Characteristics of children, parents, and household

- The average weight of Korean children at age 4 was 16.97kg with average height of 103.79cm. The average sleep time was 9 hours and 56 minutes. Children spent 6.88 hours in early childhood programs, and about 1.36 hours watching TV or other multimedia programs. Girls were more advanced than boys in terms of creativity and language development. Boys were more active

than girls in terms of social-emotional development.

- Parents aged 30-39 accounted for the majority of mothers and fathers (83.5% and 71.5%, respectively). More than one third of mothers and fathers were college educated (38.2% and 43.1%, respectively). Most of the fathers (94.7%) and less than half of the mothers (43.0%) were employed.
- Not counting the panel child, the average number of family members was 3.05. Nine out of 10 families (90.2%) were made up of parents and their children only. Average monthly income was 4,849,200 won (about \$4,840).
- Early childhood education and care (ECEC) services the children (four-year olds as of 2012) used the most was child care center (60.7%), followed by kindergarten and private institutions.

#### Characteristics of child care support services and policies

- In terms of childcare support services, about four out of 10 families (40.4%) reported that they received some form of support for ECEC services, followed by physical checkups (27.9%), and mandatory vaccinations (27.3%).
- The majority of families responded that they were satisfied with various childcare support policies (ranging from 48.3%-75.5%).
- Families reported that their workplace had family-friendly policies such as maternity leave (24.3%), childcare leave (19.8%), and paternity leave (11.3%)

### Implications

- Encourage parental intervention in terms of children's sleep hours and media use.
- Promote father's participation in childrearing by establishing family-friendly corporate/social culture and national support policies.
- Provide various childcare support services to meet diverse needs of working mothers

# Occasional Research Projects

2013 KICCE PROJECT  
REPORT ABSTRACTS

- Developing Common Indicators of Kindergarten Quality: Suggestions for the Third National Kindergarten Assessment in Korea
- Measures for Stimulating Consulting-Supervision System in Kindergarten
- Developing a Model of Special Training System of Sabbatical Leave for Kindergarten Teachers
- Middle- and Long-Term Planning to Address the Staffing Demands for Public Kindergartens
- Comparison of Financial Supports for Kindergartens and Childcare Centers
- Setting Enrollment Priority Groups for Childcare Centers
- Development of E-books for Parents: Introducing "Nuri Curriculum 3-5"
- Current Status of Using Student Records in Kindergartens and Improvement Measures
- Determining Class Size and Ratio in Childcare Centers: Focusing on Preschool Classes
- Effective Operation of Parent Monitoring System in Childcare Centers

## Developing Common Indicators of Kindergarten Quality: Suggestions for the Third National Kindergarten Assessment in Korea

Myung-Lim Chang  
Yujin Yang

### Purpose

- In order to provide quality early education to all children in Korea, the government has periodically conducted a national kindergarten assessment since 2008. While the national assessment has contributed to improving the quality and operational efficiency of kindergartens, it has also raised concerns among practitioners in the field such as the workload of teachers and administrators (e.g., preparing for required data, documents, and site visits) and regulatory imbalance among local governments (e.g., site visits not conducted in some regions).
- This study aimed to improve the national kindergarten assessment system by developing a 'Kindergarten Assessment Index' for the third round of kindergarten assessment ('14-'16) and proposing a more appropriate kindergarten assessment measures.

### Methods

- In developing the common index for national kindergarten assessment, the research team took the following process: literature review, data collection and analysis, advisory meetings with government officials (i.e., Ministry of Education), meetings with assessment staff and evaluation faculty, operation of kindergarten assessment task force, and identification of common indexes and sub-elements.

### Results

#### Assessment Index for the third National Kindergarten Assessment (A proposal)

- The third kindergarten assessment evaluates kindergartens on the basis of 100 points in four areas (i.e., curriculum, environment, health and safety, and administration) and 11 items.
- Common assessment indexes account for 90 points and 10 points are allotted to region-specific indexes in order to reflect regional characteristics.
  - Curriculum (30 points): goals and plans of education (10), daily operation and teaching

- method (10), learning evaluation method and utilization (10)
- Learning Environment (15 points): indoor and outdoor environment (10), provision and management of teaching materials and instruments (5)
- Health and safety (15 points): health care and guidance (10), safety management and guidance (5)
- Administration (30 points): working conditions and professionalism of staff (10), budget planning and its operations (5), family and community relations (5), afterschool program (10)

#### Strategies for Improving Kindergarten Assessment

- Reduce the number of items (i.e., 15 to 11) in the Kindergarten Assessment and standardize the evaluation process
- Use a five-point rating scale, with weighted scoring for key indicators
- For selected indicators, apply differentiated rating criteria depending on the type and size of kindergartens
- Present an evidence for accurate and objective appraisal of quality for each index; provide a detailed and specific manual for users
- Simplify, objectify, and professionalize the process/content of self evaluation, written assessment, and site assessment
- Utilize the findings of the assessment to improve the quality of kindergartens

### Implications

- Organize and operate city-province councils for kindergarten assessment
- Organize and manage a pool of external evaluators for kindergarten assessment
- Submit self-evaluation reports for the 2 years that the assessment is not carried out (of the three-year period of kindergarten assessment)
- Establish a portal site for kindergarten assessment, disseminating and sharing comprehensive information and best practices
- Conduct more research on kindergarten assessment and monitor its progress and use

## Measures for Stimulating Consulting-Supervision System in Kindergarten

Eun-Young Choi  
Hyejin Jang  
Haein Kim

### Purpose

- Consulting is reported to be an effective way of supporting educational institutions, and it is gaining worldwide attention as an efficient approach to support professional development of teachers. In Korea, teachers have made use of consultation intending primarily to provide quality education. In order to make consulting-supervision system more active in the areas of curriculum and teaching, a consensus was made on developing a manual, which reflects demands from teachers. The purpose of this study was to develop the manual for consultants and to propose improvement measures to make Consulting-Supervision System more active in kindergarten classes.

### Methods

- The study was conducted using literature review, surveys, and in-depth interviews. Principals of public and private kindergartens (n=153) participated in a survey. In-depth interviews were conducted with kindergarten consultants (n=6).
- The study examined the following: direction for and status of Consulting-Supervision System, needs of consultants on the process and procedures of consulting, development of a manual for consultants, and policy recommendations for stimulating the consulting-supervision system.

### Results

#### Operating status of Consulting-Supervision System

- Out of 8,538 kindergartens, 6,993 kindergartens participated in Consulting-Supervision System in kindergarten classes in 2012, which showed 1.5 times increase, compared to 4,131 participating kindergartens in 2011. Consulting-Supervision System was mainly conducted in the areas of curriculum (e.g., development/implementation/assessment of curriculum) and teaching.

#### Demands from consultants on the process and procedures of Consulting-Supervision System

- Difficulties of Consulting-Supervision System from the perspective of consultants included involuntary and uncooperative clients and a lack of opportunities to develop consulting expertise.
- Consultants said important process in Consulting-Supervision System was 'evaluation report,' and the most difficult process was to come up with a solution to a problem.

#### Development of a manual for consultants

- A manual for Consulting-Supervision System on Nuri Curriculum was developed, focusing on curriculum and teaching. The manual followed the direction of Consulting-Supervision System proposed by Ministry of Education in 2013, which emphasized the expertise of consultants and on-site support system.

### Implications

- To stimulate the implementation and utilization of Consulting-Supervision System, the following policy recommendations are suggested:
  - Expand and diversify the scope and content of consulting-supervision beyond its current focus on curriculum and teaching
  - Provide targeted training opportunities for consultants to meet diverse needs of clients
  - Encourage face-to-face meetings between consultants and clients
  - Offer a sustained long-term consulting-supervision system
  - Ensure a strong pool of quality consultants (e.g., the number of consultants and their areas of expertise)

## Developing a Model of Special Training System of Sabbatical Leave for Kindergarten Teachers

Mugyeong Moon  
JooYoung Jung  
Jihee Lim

### Purpose

- The research is to provide an effective training model for kindergarten teacher's sabbatical leave by reflecting on feedbacks from kindergarten teachers, officials of local offices of education, and staff of teacher training institute based on a pilot program in 2013.

### Methods

- A total of 320 public kindergarten teachers in 17 cities and provinces nationwide participated in the survey. In-depth interviews were conducted with officials of Ministry of Education, kindergarten teachers, and elementary and middle school teachers who participated in sabbatical leave system.

### Results

#### Perceptions and needs of teachers on special training during the sabbatical year

- 65~78% of kindergarten teachers responded they are not aware of objectives, selection criteria, operation and obligations of the sabbatical system.
- There is an urgent need for the diversification of the training program during sabbatical leave since all of the current programs are entrusted programs run by local universities.
- The interviewed government officials pointed out a need to share the know-how of effective programs and performances.

#### Basic operational directions of sabbatical-year special training for kindergarten teachers

- Purposes and objectives targeting teachers' professional development
- Strengthening autonomy of teachers in the selection of training programs and support
- Strengthening exchanges of specialized training programs, and sharing best practices among 17

cities and provinces

- Emphasizing a substantial contribution to improve the quality of early childhood education through field application of results of sabbatical study leave

#### Detailed plan for improving teacher's sabbatical-year special training system

- Selection size and targets: Quota system is recommended (at least 1% in 2014, and to be expanded to 2~3% in the future) and diversification of targets by including private kindergarten teachers as well as managerial level teaching staffs
- Timing of selection: Should be completed by November - December of the previous year
- Training program: Enhanced individualized self-training, diversification of training institutions, initiating a more suitable evaluation on outcomes of sabbatical study leave, mandating active sharing of training programs and successful cases among cities and provinces, and alignment of sabbatical training system with elementary and middle school.
- Operation system: Sharing and Improvement of complaints, a systematic study provides consulting supports for research year by forming a council of each region, and designating department that is in charge of kindergarten teacher's research-year
- Funding and support for the sustainable and stable operation of sabbatical study leave system for kindergarten teachers
- An operation model of kindergarten teacher's sabbatical study leave system needs to unfold in 3 phases: 1) preparation, 2) execution and evaluation, 3) completion and preparation for a come-back to ECE settings

### Implications

- The study contributed to the revision of operation manual of kindergarten teachers' sabbatical study leave system for the all-out launch in 2014 by Ministry of Education and city/provincial Education Offices. Thus, it contributes to efficient operation and stabilization of sabbatical study leave system in the field of early childhood education.



## Middle- and Long-Term Planning to Address the Staffing Demands for Public Kindergartens

Eunyoung Kim  
Jinah Park  
Moonjeong Kim

### Purpose

- In pursuit of expanded public service through early childhood education, Korean government plans to increase the number of public/government-run kindergartens, and accordingly teachers working for those kindergartens as well.
- This research aimed to provide a mid-long term supply and demand estimates of teachers of public/government-run kindergartens by forecasting teacher demands in accordance with changes in the number of young children and with the standards for staffing in kindergarten.

### Methods

- Literature review was conducted in 3 steps. Laws and regulations related to kindergarten teachers were examined, statistical data was analyzed, and relevant cases were studied. This study also ran a supply and demand simulation to predict demands for national/public kindergartens. Advisory meetings were held to test its validity.

### Results

#### Kindergarten staffing requirements and current status

- About half of kindergartens (52.7% as of 2013) in Korea are public or government-funded kindergartens. In terms of the number of classes, children, and teachers, just a little more than a quarter (26.9%) of total kindergarten classes, about one in five kindergartners (21.6%) and about a quarter of kindergarten teachers (23.5%) were in public or government-funded kindergartens. Average number of children per teacher was 13.7 in public and 16.9 in private kindergartens.
- Kindergarten staffs are divided into four groups by position: director, assistant director, master

teacher, and teacher. Besides director and assistant director, more than 1 teacher is needed for each class; but different regulations are applied if there are 2 classes or less in a kindergarten.

- When looking at the number of newly employed teachers in public/government-run kindergartens from 2001 to 2013, it was 200 to 300 people on average, except for the 2005-2007 period when the number soared to more than 500.

#### Supply and demand estimates for teachers

- The number of children (ages 3-5) who will attend public/government-run kindergartens was predicted by regions and ages. These numbers were calculated by using both predicted value of the subject of early childhood education from 2013 to 2030 and the 2012 ratio of kindergartener composition by types of establishment (e.g., public/private).
- Teacher demand estimation showed that, except for Sejong city, which is a planned city, the demand in Seoul, Incheon, and Gyeonggi regions increased greatly, while the demand in Gangwon, North Jeolla, South Jeolla, and North Gyeongsang regions decreased a little.
- The size of newly employed teachers was estimated by adding reduced or increased quota compared to last year's to expect the number of people to retire, based on the premise that vacancy (quota minus current number of staffs) is zero, and the number of teachers on leave is same as the number of teachers who return to work.
- It is estimated that the size of new employment will decline to 400 in 2014 from 904 in 2013, and then will go up again. It, however, is predicted that 1,000 new hires are necessary every year, because it is expected that the size of new hires will decrease after 2022 when the number of people who is expected to retire soars.

### Implications

- Increase accessibility and enrollment rate of public/government-funded kindergartens
- Reduce the teacher to student ratio.

- Increase the number and percentage of full-time teachers
- Set standards for teacher qualifications to work in public/government-funded kindergartens
- Establish public/government-funded kindergartens considering equity and accessibility issues among regions.
- Bridge the regional gaps by expanding incentives for teachers in vulnerable regions.

## Comparison of Financial Supports for Kindergartens and Childcare Centers

Eunseol Kim  
Yoon Kyung Choi  
A Ra Cho

### Purpose

- Korean government has increased financial support for early childhood education and care. Expanded public investment needs to be examined in terms of its efficacy and appropriateness. However, estimating the expenditure for both sectors as a whole has been a challenge due to the split system of education and care. The purpose of this study was to examine the government's overall expenditure on kindergartens and childcare centers.

### Methods

- Data was collected through e-mail surveys. Two finance officers from each of the 17 local governments (one in charge of education sector and the other in charge of childcare sector) responded to the survey (n=34). Information on each local government's funding allocations (e.g., support items and amounts) on both kindergartens and childcare centers was examined.

### Results

#### Public expenditure on kindergartens

- Funding was allocated to the following five areas: tuition, human resources, educational activities, kindergarten administration and management, and improving educational environments
  - Tuition (support for students): Tuition support included enrolled students' tuition (100% support) and afterschool programs (62% of children received government support), including tiered support for lunch and snacks.
  - Human resources (support for teachers): Public kindergarten teachers' salary was fully supported (100%). Support for private kindergarten teachers was provided in the form of monthly allowance (e.g., homeroom teacher allowance, benefit allowance, and teacher al-

lowance). Total amount of this support for private teachers ranged from 460,000 to 510,000 won (about \$460-510), which varied by provinces/municipalities.

- Educational activities (support for institutions): Support items included labor expenses (for support staff), teaching materials and instruments, educational program operation, kindergarten assessment, reading education, specialized program operation, and ECEC collaborative network.
- Administration and Educational Environment: For the improvement of program operation and educational environment, more than 140 billion won a year (about \$140 million) was provided to public kindergartens, and for 20 billion won (about \$20 million) to private kindergartens.

#### Public expenditure on childcare centers:

- Funding was allocated to the following three areas: childcare, human resources, and facility improvement
  - Child care: Support items included infant/toddler care expense (age 0-2), tuition for childcare centers (for children ages 3-5), childcare fee (tiered support) for extended care or children from low income families, and afterschool activities for elementary school students who use child care services.
  - Human resources: Support items included funding to institutions and to individual teachers. Institutions (e.g., public/non-profit childcare centers and infant/toddler care facilities) received general labor cost support for teachers. Individual teachers received Nuri Curriculum teacher allowance (300,000 won, about \$300), infant/toddler care staff allowance (100,000 won, about \$100), working condition improvement allowance (120,000 won, about \$120), and long-term service allowance (30,000-50,000 won, about \$30-50) in some regions.
  - Facility improvement: Support items included construction and maintenance fee for public/non-profit facilities (300,000 won, about \$300), equipment and book purchase, and heating and cooling cost. For private childcare centers, public-funded centers received support for its operating cost (8,750,000 won, about \$8,750); facilities that passed evaluation approval

received environment improvement cost support. Private facilities received support for teaching materials and instruments (500,000-1,200,000 won, about \$500-\$1,200), and facilities in rural areas received support for vehicle operation. Since 2012, Nuri Curriculum support has been provided (70,000 won per a child).

#### Comparison of Financial Supports for Kindergartens and Childcare Centers

- Budget: While support for kindergartens focus on educational activities, support for childcare centers focused on functional operation of the programs
- Payment methods of wages: Public kindergartens and public childcare centers use different methods of payment when paying wages. While 100% of wages of public kindergarten teachers are supported by government (i.e., National Treasury), only 30-80% of wages of public childcare center teachers are supported by central and local governments, and the rest was covered using childcare center operating costs.
- Lunch and snack fees: Childcare center tuition covers lunch and snacks as well as all other full-day care services provided by childcare centers, whereas kindergarten tuition does not.
- Wages of support staffs: Almost the same amounts of subsidies were provided to kindergartens regardless of auspices, whereas limited supports were provided to childcare centers in some provinces, mainly focusing on supporting government-funded centers.

#### Implications

- Focus on improving the quality of childcare centers by clearly identifying specific support items (e.g., target areas that need improvement and attention)
- Strengthen the wage subsidies for support staffs to enhance quality of childcare.
- Support 100% of the wages of public childcare center teachers to stabilize the operation of childcare centers so that they can focus on the quality and content of childcare, rather than putting efforts in securing labor cost.

- Increase the amount of teacher allowance for private and home childcare centers so that it aligns with that of kindergartens, especially for the teachers whose educational qualifications are equivalent to those of public kindergarten teachers and who implement the same national common curriculum (i.e., Nuri Curriculum).
- Maintain consistency in terms of supporting lunch and snack fees for kindergartens and childcare centers: currently, lunch and snack fees are excluded from kindergarten tuition supports.
- Research on the level of government supports for various types of services (e.g., afterschool programs) provided through ECEC programs and conduct comprehensive assessments.

## Setting Enrollment Priority Groups for Childcare Centers

Hae-mi Yoo  
Jeong-won Lee  
Sewon Lee

### Purpose

- With the implementation of free childcare policy, a higher demand for childcare centers and extensive waiting list for childcare service are expected. Under the circumstance, the families with actual demands would have difficulty in using childcare centers. The main purpose of this study was to provide adjusted guidelines for enrollment priority by investigating the level of child care demands by each household type.

### Methods

- Data was collected from literature review, statistics on Korean families, and a parent survey. Literature was reviewed on waiting list of childcare centers and their regulations. Laws and policies on childcare support were also examined with foreign case studies. Raw data on economically active population from Statistics Korea and household analysis by types of work were re-analyzed. A survey completed by parents with young children ages 0-5 (n=1,000) was analyzed to examine their childcare context and needs.

### Results

#### Current status of enrollment waiting by household types

- About two thirds of parent respondents said they had an experience of being on the waiting list to enroll their children in childcare centers (65.4%). The majority of them were living in large cities (74.7%); and most of them waited to register for public/government-funded childcare centers (68.3%).
- Except for adoptees, children of working parents accounted for the highest percentage (75.3%) of those who were on the waiting list, followed by children from parents with disability (68.8%),

and children from parents with illness (66.7%).

- Average number of institutions they are waiting for is 4.7 for children cared for by family members, and 4.1 for children with working parents.

#### The need for adjusting enrollment priority by household types

- When asked about their necessity of enrollment priority (using a 5-point scale), families responded the following: children of parents with disabilities (4.53), children of parents with illness (4.39), children of low-income single parent (4.37), children living in child welfare facilities (4.19), basic livelihood security recipients (4.08), and children cared for by family members (4.05). Children of working parents showed 4.03 points, similar to those living with grandparents.

#### Enrollment priority of working parents' children

- Respondents indicated, children of parents with disabilities (89.7%), children of parents with illness (86.5%), and children of low-income single parent (83.2%) need to be prioritized in child-care center enrollment

### Implications

- To improve the efficacy of national expenditure on young children, this study recommends adjusted guidelines for enrollment priority reflecting actual child-care demands. The following considerations are suggested:
  - Option 1. Give priority to all children with working parents, then give weighted priority points to the following groups of children in the order of: A) children with low-income single parent and basic livelihood security recipients, B) children from second lowest income class families, and children living with grandparents, and C) children who have two or more siblings and multicultural families.

- Option 2. Limit the top priority groups to the following: children with working parents, children from low-income single parent, children living in child welfare facilities, and basic livelihood security recipients.
- Other options: Establish parents' working hour limit. Children get priority only when their parents work at least 15 hours or 3 days a week or more. Additionally, children of parents with illness and children cared by family members get top priority.
- Also, regional measures need to be considered. For large cities, top priority can be given to children with working parents, children of parents with illness, and children living in child welfare facilities. For other regions, give priority to children who have two or more siblings and multicultural backgrounds.

## Development of E-books for Parents: Introducing “Nuri Curriculum 3-5”

Mi Kyung Kwon  
Yun-Jin Lee  
Jayeon Koo

### Purpose

- With the implementation of the Nuri Curriculum (national common curriculum for children ages 3-5) many parents were in need of policy communication channel to be informed of the benefits of Nuri Curriculum. In response, Korean government has been trying to find a more effective way to provide relevant information and materials to families.
- An e-book for families was developed to be posted on “i-sarang” website (a child care portal website). The development of this e-book was to introduce the purpose and content of Nuri Curriculum, and to help families to apply the curriculum to childcare activities at home.

### Methods

- The survey was designed to investigate the parents’ awareness on childcare center’s operation of Nuri Curriculum for Age 3 to 5. Parents with young children (ages 3 to 5) participated in the survey (n=900, 300 parents from each age group). The survey asked about parents’ understanding of the content of Nuri Curriculum and their understanding of Nuri Curriculum as a childcare system (e.g., to ensure free education and care for all preschoolers).

### Results

#### Determining the Content of Nuri Curriculum to be shared with Families

- The purpose, structure, and content of Nuri Curriculum for Age 3 to 5 were analyzed based on press release, and related notifications.
- How the “Nuri Curriculum for Ages 3-5” is applied in childcare centers was examined

#### Developing and Uploading the E-Book for Families

- The E-book consisted of the following: An overview of Nuri Curriculum, domains of Nuri Cur-

- riculum, implementation of Nuri Curriculum, connectivity of Nuri Curriculum, amount of support for Nuri Curriculum for each age group (as it is also linked to a free early education and care policy), how to apply for child care allowance, frequently asked questions, and child care tips.
- The final draft of manuscript was designed in the form of an e-book. The e-book was uploaded to “i-sarang childcare portal”, Korea’s online childcare portal.

### Implications

- Diversify the information channel to communicate well with parents of young children.
- Establish an exclusive communication channel for Nuri Curriculum, such as EBS (Korea’s education channel) or education-specific cable channel

## Current Status of Using Student Records in Kindergartens and Improvement Measures

Yun-Jin Lee  
Mi Kyung Kwon  
Minkyong Ha

### Purpose

- Along with the amendment of the “Guidelines for Preparing and Managing Student Records in Kindergartens” in 2013, student records in kindergartens have now become a part of public records. The purpose of this research was to promote effective use of student records in kindergartens by examining current status of documenting, managing, and utilizing the student records and by identifying the needs of teachers.

### Methods

- Data was collected from a literature review, survey, and advisory committee meetings. A national sample of kindergarten teachers (n=406) participated in the survey (201 teachers in public kindergartens and 205 in private kindergartens).

### Results

#### Developing and disseminating a guidebook for preparing Kindergarten Student Records

- A guidebook for preparing Kindergarten Student Records was developed and distributed to all kindergartens in the nation to improve accessibility and efficiency.
- Within the guidebook, examples of student records were presented by each age group and by situations considering developmental stages of children (which was reported as the most challenging aspect in preparing student records).

#### Current status of documenting and managing Kindergarten Student Records

- While Kindergarten Student Records should be created and managed through an electronic record production system, about one in 10 public kindergartens (9.5%) and about one third of private kindergartens (29.8%) were not equipped with an electronic portal system.

- In public/government-funded kindergartens, about 80% of regular documents are processed electronically, but only 50% for student records. In case of private kindergartens the rates were about 40% and 36.6%, respectively.

#### Usage Status of Kindergarten Student Records

- About three quarters of respondents reported that they did not send kindergarten student records to elementary schools (74.4%); it was because elementary schools didn't request it (65.5%) or because it was not customary to do so (28.8%). About three quarters of respondents reported that they did not send kindergarten student records to parents (73.3%).
- When a child transfers to another kindergarten (or institution), only about 40% of teachers reported that they send student records to the institution. There was a significant difference in this practice between public and private kindergarten teachers (57% and 27%, respectively).

### Implications

- Develop and disseminate guidelines for management of student records in kindergartens
- Offer workshops for kindergarten directors and teachers to effectively manage and utilize kindergarten student records
- Encourage and support all kindergartens to install and utilize electronic task management system
- Provide parent education or send parent newsletters to inform parents of the main features and importance of kindergarten student records (e.g., parent consent is needed to share student records with other institutions)
- Revise related laws and regulations to mandate the transfer of kindergarten student records to other institutions (e.g., other kindergartens and elementary schools).

## Determining Class Size and Ratio in Childcare Centers: Focusing on Preschool Classes

Jeongrim Lee  
Meehwa Lee  
Ja-yeon Koo

### Purpose

- Currently, childcare centers are allowed to serve a few more children in a class than the maximum number set by childcare regulations. As the concerns regarding the quality of childcare sector have increased, there is a growing need for reducing teacher-child ratio and for reinforcing the class size regulations in childcare centers. The purpose of this study was to review the adequacy of teacher-child ratio in childcare centers, and propose the measures to place teachers accordingly.

### Methods

- Data was collected from a survey and in-depth interviews on teacher-child ratio and improvement measure for class size issues in childcare. Survey was completed by directors of childcare centers in Seoul and Gyeong-gi regions (n=148) and teachers serving children ages 3-5 in the centers (n=286). In-depth interviews were conducted with childcare center directors (n=3) and teachers (n=5).

### Results

#### Perceptions on teacher-child ratio

- Regarding proper teacher-child ratio by age group, childcare center directors (D) and teachers (T) responded as follows:
  - Age 3 class - 1:12 (D), 1:11 (T)
  - Age 4 class - 1:15 (D), 1:14 (T)
  - Age 5 class - 1:17 (D), 1:16 (T)
- For all age groups, adequate teacher-child ratio suggested by teachers was lower than the ratio suggested by directors.

- Regarding current status of serving more children than maximum number set by law, directors of public/government-funded childcare centers tended to support the idea of strictly reinforcing the class size regulations more strongly than private center directors (43.6% vs. 21.2% for Age 3; 32.7% vs. 21.3% for Age 4; and 30.9% vs. 21.3% for Age 5, respectively).
- All teacher respondents, regardless of auspices, supported the idea of strictly reinforcing class size regulations.
- Directors and teachers preferred the idea of using teacher aids assigned to a class (rather than floating teachers) (51.7% and 71.8%, respectively) who can work 3-5 hours a day (49.3% and 70.9%, respectively) all year round (76.7% and 79.1%, respectively).

### Implications

- Reduce teacher-child ratio to improve the quality of childcare services
- Reinforce the childcare regulations regarding class size and teacher-child ratio
- Encourage childcare centers to run classes by age groups
- Effectively utilize additional human resources (e.g., teacher aids, assistants, substitute teachers) to support childcare teachers, and devise ways to reduce their excessive workload (e.g. team teaching, 2-shift system).



## Effective Operation of Parent Monitoring System in Childcare Centers

Misun Yang  
Moon-hee Suh  
Jihee Lim

### Purpose

- Parent involvement in childcare has positive consequences for improving the quality of care services provided to young children in childcare centers (e.g., nutrition, health, hygiene, and safety). Parent monitoring system has been introduced in 2013 to use it as a channel for parents to participate in the operation of childcare centers. The purpose of this study was to examine the perceptions and needs of field officers who are in charge of operating and supporting parent monitoring group.

### Methods

- Data was collected from a literature review, an e-mail survey, in-depth interviews, and advisory meetings. E-mail surveys were completed by government officers (n=167) and childcare information center staff (n=34) in 16 cities and provinces who are in charge of parent monitoring. In-depth interviews were conducted with field officers, parent monitors, and childcare center staff.

### Results

#### Operating status and demands of parent monitoring group

- As of June, 2013, more than three quarters of local and municipal governments (76.1%) established parent monitoring group.
- Budget items needed for parent monitoring project:
  - Government officials who are in charge of parents monitoring responded that there was a need to increase allowance (32.3%) to provide training fee (22.2%) for parent monitoring group.
  - Staffs in childcare information centers saw the necessities of increasing training budget, and increasing the allowance provided to parent monitoring group and to childcare information

- center staffs.
- Need for establishing an efficient parent monitoring system: There was a consensus regarding the need for an efficient monitoring system (67.7% of government officials and 90% of childcare information center staffs).
- Coherence between reports submitted by parent monitoring group and actual service at childcare centers: 77.9% of government officials and about half of childcare information center staffs answered that they were coherent.
- Impact of parent monitoring: About half of government officials positively expected the impact of parent monitoring project in terms of improving the reliability of childcare centers; but childcare information center staffs showed a lower level of expectations than government officials.
- Need for improving parent monitoring indicators: 70% of government officials and 90% of childcare information center staffs agreed on the need.

### Implications

- Strengthen selection criteria for parent monitors and provide continuous training
- Add the following budget items when planning for parent monitoring project: pre-operational training and continuing education, business operating costs, and personnel allowance (e.g., childcare information center staffs)
- Increase allowance for parent monitoring group activities
- Mandate parent monitoring group to have accident insurance to guarantee their safe activities
- Add the following items to the parent monitoring manual: FAQs, parent monitoring group's role and monitoring procedure, monitoring report sample or template.
- Establish comprehensive management system for efficient operation of parents monitoring project.
- Revise indicators for parent monitoring of childcare centers: Maintain current 4 areas (nutrition, health, hygiene, and safety management), but reduce the number of indicators to 13 items and 40 observations

---

## 2013 KICCE PROJECT REPORT ABSTRACTS

Korea Institute of Child Care and Education  
7F, 8F, 10F, 11F, Anguk bldg, 33, Yulgok-ro Jongno-gu Seoul, 110-734, Korea  
Tel 82-2-398-7700 Fax 82-2-730-3313  
[www.kicce.re.kr/eng](http://www.kicce.re.kr/eng)

Young Lee, President

Published September 30, 2014 in Korea KICCE  
©2014 KICCE

Editorial Designed by yuwolae (82-2-859-2278)