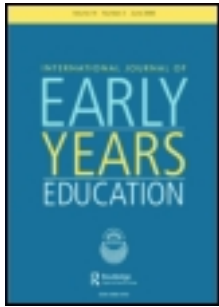


This article was downloaded by: [Urban Institute Library], [Heather Sandstrom]
On: 07 September 2012, At: 12:01
Publisher: Routledge
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered
office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



International Journal of Early Years Education

Publication details, including instructions for authors and
subscription information:

<http://www.tandfonline.com/loi/ciey20>

The characteristics and quality of pre- school education in Spain

Heather Sandstrom^a

^a Center on Labor, Human Services, and Population, Urban
Institute, Washington, DC, USA

Version of record first published: 03 Sep 2012

To cite this article: Heather Sandstrom (2012): The characteristics and quality
of pre-school education in Spain, International Journal of Early Years Education,
DOI:10.1080/09669760.2012.715012

To link to this article: <http://dx.doi.org/10.1080/09669760.2012.715012>



PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any
substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing,
systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation
that the contents will be complete or accurate or up to date. The accuracy of any
instructions, formulae, and drug doses should be independently verified with primary
sources. The publisher shall not be liable for any loss, actions, claims, proceedings,
demand, or costs or damages whatsoever or howsoever caused arising directly or
indirectly in connection with or arising out of the use of this material.

The characteristics and quality of pre-school education in Spain

Heather Sandstrom*

Center on Labor, Human Services, and Population, Urban Institute, Washington, DC, USA

(Received 7 February 2012; accepted 3 July 2012)

We examined 25 four-year-old pre-school classrooms from a random sample of 15 schools within a large urban city in southern Spain. Observational measures of classroom quality included the Early Childhood Environment Rating Scale-Revised, the Classroom Assessment Scoring System and the Observation of Activities in Pre-school. Findings revealed that, on average, classroom quality was low in regards to space and materials, developmentally appropriate activities and instruction; however, classrooms were relatively high on positive climate and productivity, and teachers demonstrated positive relationships with families. The observed ratio of children to teachers was high across classrooms. Results from regression analyses indicate that a higher ratio was associated with lower quality language modelling, teacher feedback and personal care routines available in these settings. Qualitative data from teacher interviews highlighted the importance of a pre-school education for children's development and school readiness, but also emphasised the challenges teachers faced with the new government-subsidised, universal pre-school programme, including increased class sizes and a lack of staff and resources. Implications for maintaining high-quality programme standards are discussed.

Keywords: early childhood education; universal pre-school; classroom quality; mixed-methods; Spain

Introduction

The demonstrated benefits of early childhood education have recently prompted increased political interest internationally. Most recently, in 2006, the Spanish national government introduced new educational reform legislation, the Constitutional Law of Education (*La Ley Orgánica de Educación*; LOE), which mandates autonomous communities to offer free, voluntary pre-school education for children between the ages of three and five and increase the availability of childcare enrolment slots for children under three. The LOE authorises a complete reform of the Spanish education system from birth through university level as well as adult professional programmes in efforts to improve academic achievement and increase student graduation and college attendance rates. In the legislation, the Spanish Government identifies early childhood education (known as *la educación infantil*) as one of several initiatives aimed at enhancing student performance in order to converge with other nations in the European Union. Moreover, the guaranteed provision of pre-school education for three- to five-year-olds is recognised as a means to assist parents with the balance between

*Email: hsandstrom@urban.org

work and family life. The subsidisation of pre-school education across the nation ultimately reduces the financial burden that such programmes would otherwise be on families.

Spanish pre-school enrolment rates have steadily increased over the past decade such that nearly 100% of children ages three through five currently attend pre-school (Institute of Evaluation 2010). In contrast to the United States and many European countries where most working parents of young children depend on early childhood programmes primarily for childcare, in Spain it has become customary for parents, regardless of their socio-economic background and employment situation, to send their children to school starting at age 3. Although pre-school is voluntary in nature, and compulsory education does not begin until age 6, cultural tradition, combined with new legislation that stipulates that pre-school be publicly-funded and free to families, has encouraged families – even those with non-working mothers – to enrol their children. The main reason cited is not the need for childcare but a desire to have more socialisation and learning opportunities for their children (Tietze, Hundertmark-Mayser, and Rossbach 1997). Now that the country has nearly succeeded in achieving its goal of universal pre-school education, the improvement of the quality of services provided should be a top priority.

The study presented herein explored this issue of the quality of care and education in Spanish pre-school programmes under the LOE. The study took place in Seville, Spain, the capitol of the autonomous community of Andalusia. This city was selected for several reasons. According to the 2006 Programme for International Student Assessment (PISA), Andalusia had the lowest average student assessment scores in reading, math and science, the lowest per capita income level and the lowest average educational attainment level of parents compared to other mainland autonomous communities of Spain (Institute of Evaluation 2007). These risk factors make the region a desirable location for educational reform and an interesting setting for research. Previous research on pre-school classroom quality conducted in the early 1990s also indicates that in comparison to other major Spanish cities – Barcelona, La Coruña and Ciudad Real – Seville demonstrated the lowest quality and the greatest need for improvement in resources and instruction (Palacios, Lera, and Oliva 1995).

Approximately 15 years and two major educational reforms later, we examined the quality of pre-school programmes in this region using a mixed-methods approach. We focused not only on structural programme qualities, such as teacher–child ratio, and the physical classroom environment but also on the quality of instruction and the personal interactions between teachers and students. Through interviews with classroom teachers and early childhood coordinators, we gained first-hand accounts of the benefits of pre-school education and the challenges teachers face in implementing the programme with limited resources and support. Our main goal was to understand more concretely how the programme was being implemented given the standards and curricular elements mandated under national and local policies, with the intention of identifying areas in need of improvement that could subsequently be communicated to local policy-makers and school officials. In addition, this study was part of a larger project in which the lessons learned in implementing a universal pre-school programme were systematically gathered in efforts to inform early education policy in other countries.

Literature review

History of early childhood education in Spain

The Spanish Government has long recognised the early care and education of young children. The first evidence of State involvement in early childhood education was the passing of the Moyano Law in 1857, under which the government created the first public education system in Spain (Fernández Gutiérrez et al. 2003). The law divided education into elementary and secondary, making the first compulsory and free. It also mandated town councils to establish pre-elementary schools for children under six years old if they had sufficient funding to do so.

After the end of the Spanish Civil War in the late 1930s, the national government recognised the growing number of working mothers and the demand for custodial care and education for their children. In response, the Primary Education Act was passed which called for, among other things, the establishment of a sufficient number of nursery schools in areas with highly concentrated populations, particularly in industrial and agricultural centres. The law endured several reforms over the years – of the most important, the acknowledgement of early childhood educators as part of the national body of teachers, which provided them with salaries equal to teachers of other grade levels (Fernández Gutiérrez et al. 2003).

In 1970, during a period of industrial and economic boom under Franco's dictatorship, the government passed the *Ley General de Educación y Financiamiento de la Reforma Educativa* (General Act on Education and Financing of Educational Reform), which financed the restructuring of the Spanish public education system. This reform opened Spain to the scientific advancements and new teaching perspectives of other western countries. As a result of the investment of public funds, compulsory education was extended through age 14 and a level of free, voluntary pre-school education was established for children ages four and five years – the latter of which covered approximately 80% of the total population of children of these ages. Similar to primary teachers, pre-school teachers were required to have a teaching degree (Fernández Gutiérrez et al. 2003).

Two decades later, the Spanish Government passed another major educational reform act, the *Ley Orgánica de Ordenación General del Sistema Educativo* (LOGSE; Act on the General Organization of the Education System). Under this law, compulsory education spanned 10 years and consisted of two stages: primary education from age 6 through 12 and secondary education from age 12 through 16. Early childhood education (ECE) was acknowledged for the first time as a period extending from birth to six years. This period was divided into two stages, the first spanning birth to three years and the second from 3 to 6 years.¹ Under the LOGSE, teachers of the second stage were required for the first time to possess a specialised degree and training in ECE.

Since the implementation of the General Act on Education in 1970, ECE had slowly developed as a downward extension of primary education. First, classrooms for five-year-olds were added to primary schools, followed by the addition of classrooms for four-year-olds. As a result of the LOGSE, classrooms for three-year-olds were eventually added to most primary schools as well, such that by 1994, 56% of Spanish three-year-olds attended school along with the nearly 100% of four- and five-year-olds (Fernández Gutiérrez et al. 2003). The addition of this age group in the school system shaped the societal view towards pre-school as one academically oriented and not based on serving childcare needs of families. Consequently, the

activities in pre-school classrooms were, and often continue to be, quite similar to elementary school practices, with a strong emphasis on individual seatwork and not play-based activities (Lera Rodriguez 2007).

Until recent legislative changes, ECE programmes were financed in two ways; public school programmes were free and supported through government funding, with parents covering the costs of materials and special activities, and private school programmes were dependent on student tuition fees to cover the costs of personnel salaries, facility maintenance and physical resources. In the 1970s, approximately 60% of children in Spain who attended pre-school went to private schools, while 40% attended public schools. By the mid-1990s, the percentage of children attending public schools had increased to 65% (Tietze, Hundertmark-Mayser, and Rossbach 1997).

ECE under the Constitutional Law of Education of 2006

A major tenet of the Constitutional Law of Education of 2006 (LOE) is the universal access to a free education during the second stage of ECE (henceforth referred to as 'preschool education'). Pre-school education in Seville is currently provided in three settings: (1) public schools which also offer primary education through age 11, (2) private and faith-based schools which, in most cases, provide both primary and secondary education, and sometimes even post-secondary certification programmes and (3) public and private childcare centres, or 'guarderías', which mostly serve infants and toddlers but often have a pre-school classroom. *Guarderías* that are not authorised as providers of pre-school education, and want to serve children of this age, must adapt their programmes to the minimal requirements identified in the LOE. This policy was implemented to increase the availability of enrolment slots to meet the needs of all families.

Pre-school admissions requirements

Spain possesses a decentralised system in terms of the management of education, such that responsibilities are distributed among the national government, the regional governments of each of Spain's 17 autonomous communities, local education administrations and schools. The regional governments each possess a Ministry of Education ('Consejería de Educación'), and localities within each region each have a local administrative body that oversees the school enrolment process.

To enrol in a pre-school programme in Seville, parents must submit an application to their local administration, identifying the school in which they would like to enrol their child, and alternative choices ranked by preference. Because enrolment slots per school are limited and sometimes in high demand, a point system is used to give priority enrolment to families meeting particular criteria. Points are awarded for parental employment, proximity of child's residence to the school, enrolment of a sibling child in the same school and risk factors, such as low-income level, single parenthood, large family size (three or more children) or having a special needs child. Those families who do not receive their first choice are referred to their second choice and so forth. For schools that have an overwhelming number of applicants, the local administration may extend the class size limit to allow additional students to enroll.²

Curricular contents

Although no specific curriculum is mandated by law, the Spanish Ministry of Education requires specific curricular content to be covered in pre-school classrooms (Ministry of Education of Andalusia 2008). Activities must concentrate on the acquisition of skills in the areas of reading and writing, basic numeracy, communication, information technology and visual and musical expression. Students are also introduced for the first time to the study of foreign languages.

Teacher qualifications

Pre-school teachers are required to have a college degree in ECE or a degree in a related area of education and coursework in ECE. Public school teachers must also pass a rigorous public service examination ('las oposiciones'), comprised of a written test, a verbal defence against a review committee, and a body of evidence from a teaching practicum phase, including a portfolio and classroom observations from a supervisor.

Quality of pre-school education in Spain

Under the LOE, Spain declared it a national goal to provide free, voluntary pre-school education to all three-to-five-year-olds. Efforts to promote programme quality include requiring teachers to have a college degree and specialisation in ECE, as well as mandating specific curricular content that addresses children's development across various domains. However, previous research shows that Spanish pre-school programmes have generally met minimal quality standards and that teaching methods have often not been developmentally appropriate for young children.

Evidence from international studies of quality

In the mid-1990s, a large, cross-national longitudinal study examining pre-school quality, the International Child Care and Education Project (ICCE), was initiated in the United States and four European countries – Spain, Portugal, Germany and Austria (Tietze et al. 1996; see Tietze, Hundertmark-Mayser, and Rossbach 1997 for European study details). On average, pre-school classrooms across the participating countries met minimal standards of quality. No country stood out as having 'excellent' or even 'good' levels of quality, as measured by the Early Childhood Environment Rating Scale (ECERS); however, Spain scored significantly lower than the others on overall quality and, specifically, on the quality of space and materials (Tietze, Hundertmark-Mayser, and Rossbach 1997). While no classrooms in Austria or Portugal were considered 'poor' quality (i.e., possessing qualities that negatively affect child development) and only 2% of classrooms in Germany met such criteria, 14% of classrooms in Spain were rated as 'poor'.

It was standard for Spanish pre-school classrooms to have only one teacher and no assistant for an average of 25 children, while ratios averaged 1:10 in Germany and 1:7 in the United States (Cryer et al. 1999). Even so, teacher-child interactions, as rated by the Caregiver Interaction Scale, were generally positive in Spain, more so than in Germany and Portugal. These findings indicated that while Spanish

teachers were warm and sensitive, their classroom materials, equipment and learning activities were lacking.

Compared to the other participating European countries in the ICCE, Spanish teachers had earlier expectations for children's development, meaning they believed that children should develop skills at an earlier age. They also placed a higher value on direct instruction and worked more often with the whole group versus small groups (Tietze, Hundertmark-Mayser, and Rossbach 1997).

Of the five participating countries, Spain had the highest national percentage of children ages three-to-five years enrolled in pre-school; yet over half of Spanish mothers in the study were homemakers – a significantly higher percentage than the other countries. Accordingly, Spanish mothers described the role of pre-school as being an agent for socialising and stimulating creativity and imagination – not for custodial care as was more common in the other participating countries (Tietze, Hundertmark-Mayser, and Rossbach 1997).

In a follow-up study of the European sample when children were eight years old, children's cognitive and language skills were positively predicted by the quality of their pre-school experiences (Tietze, Hundertmark-Mayser, and Rossbach 1999). Children who experienced pre-school classrooms that were rated highly on process quality and teacher–child interactions had better cognitive and receptive language skills than their peers who experienced poorer quality environments and interactions. Moreover, children who had pre-school teachers with earlier developmental expectations and classrooms with higher child-teacher ratios – both characteristic of Spain – had weaker language skills at eight years old.

Similar findings were found in the Preprimary Project sponsored by the International Association for Evaluation of Educational Achievement (IEA), a cross-national study of 10 countries across North America, Europe and Asia, including Spain (Montie, Xiang, and Schweinhart 2006). Children's language skills at age seven were stronger when the predominant type of activity teachers implemented was free choice. Time spent in whole group activities during pre-school was negatively related to cognitive performance at age seven, while the variety of equipment and materials available in pre-school positively related to cognitive skills.

Evidence from Spanish national study

Although evidence suggests that Spanish pre-school classroom quality may be lacking, additional research indicates that the quality of care within Spain may vary by region (Palacios, Lera, and Oliva 1995; Palacios 1998). Classrooms in four different cities across the country, including Seville, Barcelona, La Coruña and Ciudad Real, were observed to examine potential regional differences. Each region was characterised by distinctive languages or dialects, history and culture and educational traditions. After controlling for classroom- and school-level characteristics, the region in the country in which classrooms were located explained 11% of the variance in process quality and 9% of the variance in the quality of teacher–child interactions. Although the average quality of pre-school classrooms was minimal across sites, Seville scored significantly lower than the other three cities on overall quality and on each indicator of quality on the ECERS (Palacios 1998).

Evidence from local study in Seville

In a prior study that focused specifically on pre-schools in Seville, Lera (1996) found that classrooms were generally missing key components of the physical environment as measured by the ECERS. For example, they lacked materials and equipment in the areas of dramatic play (e.g., dress-up clothes) and gross motor (e.g., tricycles and outdoor toys). Teachers frequently displayed a traditional, direct approach to teaching, characterised by instructing children and supervising children's work. The majority of class time was spent doing structured, individual seat work focused on fine motor skills (e.g., drawing, writing, tracing), while less than 5% of the school day was spent in small groups and less than 4% in free play. On average, private, independent schools had smaller group sizes ($M = 20$), while public schools had slightly larger group sizes ($M = 24$), and private, faith-based schools had the largest groups ($M = 31$). Independent and public schools also had slightly higher levels of quality than faith-based schools, and classroom quality was positively associated with children's developmental outcomes.

Quality of pre-school education under new reform initiative

Nearly 15 years has passed since researchers last published data on pre-school classroom quality in Seville, Spain. Since that time, the country has seen major educational reform, but little research has been conducted to assess whether any changes have occurred in the classroom as a result. Meanwhile, studies examining the predictors of pre-school quality and the effects of pre-school on young children's development and school readiness have gained attention and support in other countries due to the expansion of government investment in early education.

For example, Pianta et al. (2005) recently explored the various predictors of classroom quality in state-funded pre-kindergarten programmes in the United States. They found that quality was higher in classrooms where teachers had a degree in ECE and child-centred beliefs about ECE. However, other structural predictors, including length of the school day, programme location (childcare centre vs. elementary school), and teacher-child ratio, did not significantly relate to programme quality. Those children who experienced higher quality instruction and closer teacher-child relationships showed larger gains in academic outcomes across the pre-kindergarten year (Howes et al. 2008).

In Spain, however, where all pre-school teachers have college degrees and the length of the school day and programme location are fairly consistent across programmes, these structural predictors are not as malleable as teachers' beliefs and practices. Moreover, the average observed ratio in the US pre-kindergarten programmes was one teacher per seven children (Pianta et al. 2005), whereas in Spain, the number of children was three to four times as large. Under those circumstances, ratio may play a larger role in classroom quality. In the past, this relationship has been difficult to estimate due to a lack of variance in ratio in observed classrooms.

Using a mixed-methods approach, the present study aims to explore the structural and process quality of pre-school classrooms in the Spanish city of Seville and the perspectives of classroom teachers towards the implementation of a universal pre-school programme. Previous research on pre-school classroom quality showed that in comparison to other major Spanish cities, Seville demonstrated the lowest quality and the greatest need for improvement in resources and instruction; therefore, we

selected that city as our focus. The findings presented are part of a larger research project that examined the implementation of ECE reform initiatives in Seville, which also included interviews with parents of pre-schoolers from the observed classrooms. The study addressed the following research questions:

- (1) Under the Constitutional Law of Education, what are the characteristics and level of quality of pre-school classrooms in Spain?
- (2) Which structural indicators of quality, including school size, school socio-economic status (SES), teacher-child ratio, teacher education, teaching experience and professional development training, relate to classroom process quality?
- (3) How do pre-school teachers view quality, and what obstacles or challenges do they face in fulfilling their role as educators?

Methods

Sample

Target age group

For the purposes of the larger project, schools not classrooms were randomly selected to participate. Yet the unit of analysis for the present study is at the classroom level. Schools had separate classrooms for each pre-school age group: three-year-old classrooms for children in their first year of pre-school, four-year-old classrooms for children in their second year and five-year-old classrooms for children completing their last year of pre-school before beginning primary school. According to educational policy, students enrolled as birth cohorts. In other words, children began the first year of pre-school the calendar year in which they turned three. Therefore, at the start of the school year in the fall, a three-year-old classroom had children who were already three as well as two-year-olds who had late birthdays.

For the purposes of this study, we targeted four-year-old classrooms. This age group was selected for several reasons. First, most literature on classroom quality originates from the United States where pre-school is generally intended for three- and four-year-olds, as children typically begin kindergarten at age five. In order to discuss the quality of the pre-school programme in Spain in the context of research in other countries, it was important to focus on the same age group as other studies. Second, the activities that are considered developmentally appropriate for a three-year-old, and the corresponding expectations one would have of their skills and abilities, differ from those of an older five-year-old or six-year-old. Most measures of quality designed for a pre-school population are centred on this middle age group, thus we decided to include only classrooms with four-year-olds in this study.

Sampling efforts

A complete list of schools located within the city of Seville was acquired from the Ministry of Education of Andalusia and filtered prior to randomisation. First, schools were limited to those that had an ECE programme. Next, childcare centres that typically served infants and toddlers and few preschoolers were eliminated. The resulting list contained both public schools and private, faith-based schools referred to as 'concertado', which received government funding to subsidise the cost of

teacher salaries but generally charged parents a sliding scale fee to cover other operational costs. Historically, pre-school education was not subsidised in *concertado* schools like primary and secondary education, and parents paid full tuition, until the passage of recent legislation for universal pre-school education.

Few private, independent schools were found, and fewer had early education programmes ($n = 2$); therefore, private, independent schools were eliminated from the list. The final sampling frame contained 144 schools, 89 public (62%), and 55 *concertado* (38%). No schools provided only pre-school. All public schools provided pre-school and primary education, while all *concertado* schools had pre-school, primary and secondary education programmes, with some also providing *bachillerato* (pre-university degree) and post-secondary professional training programmes.

Steps were taken to ensure a relative proportion of public to *concertado* schools in the final sample. Thus, we generated two separate sampling frames to stratify by school type and used proportional sampling to randomly select public schools separately from *concertado* schools. For a target sample of approximately 10% of the total population of eligible schools in the city, we randomly selected 15 schools – 10 public schools and 5 *concertado* schools.

Recruitment efforts

After randomly selecting schools, we sent letters to school directors informing them of the project and that their schools were randomly selected to participate in the study. Follow-up calls were made several weeks later to recruit the schools for participation and to obtain consent from each school director and ECE coordinator – the teacher in charge of coordinating the team of ECE teachers. During the recruitment process, we determined how many four-year-old classes were in each school. When schools had two four-year-old classes, both classes were selected and consent was obtained from each teacher. When a school declined the invitation to participate, the next school on the generated list was contacted following the same procedure until the desired sample size was achieved. Twenty-two schools were contacted in total, with an agreement rate of 68%. Reasons cited for declining participation included teachers not having interest in the study or not wanting disruptions in their classrooms, staff being very overwhelmed with work and not having time to devote to the study, and schools already participating in other research projects. *Concertado* schools declined participation twice as often as public schools. The final 15 consented schools were well distributed across the city and its barrios. Five schools had one four-year-old class and 10 had two four-year-old classes, equalling 25 classrooms across the 15 schools.

Measures

Measures included two observational assessments of classroom quality, a time-sampling observational assessment of classroom activities, and semi-structured interviews with classroom teachers and ECE coordinators in each school.

Early childhood environment rating scale-revised (ECERS-R)

The ECERS-R is a measure of global quality in centre-based early childhood programmes (Harms, Clifford, and Cryer 1998). The ECERS-R is specifically

designed for use in classrooms serving children 2.5–5 years of age. The scale consists of 43 items categorised into seven subscales: Space and Furnishings (8 items); Personal Care Routines (6 items); Language-Reasoning (4 items); Activities (10 items); Interaction (5 items); Program Structure (4 items); and Parents and Staff (6 items). Each item is rated using a 7-point quality scale ranging from 1 (*inadequate*), 3 (*minimal*), 5 (*good*), to 7 (*excellent*). Indicators are provided for these four anchor points, which outline the specific requirements for that score.

The observational period should last a minimum of 2.5 hours, but for the present study, classrooms were observed for a full school day at an average of 5 hours. All daily activities were observed, including structured learning activities, free play, recess, transitions, and routines, such as meals and toileting. The teacher interview portion of the ECERS-R was embedded into the larger teacher interview and was used to confirm specific evidence prior to scoring.

Classroom assessment scoring system: Pre-K (CLASS)

The CLASS: Pre-K (Pianta, La Paro, and Hamre 2008) is an observational instrument designed to assess pre-school classroom quality. The observational period consists of recurring 30-minute cycles – 20 minutes of observation and 10 minutes for scoring. A minimum of four cycles is required for accurate results. For this study, all observations occurred during a 2.5- to 3-hour period in the morning session of all programmes. All activities inside the classroom were observed and scored, including transitions and snack time. Outdoor recess time was not scored, as recommended by the CLASS developers.

The instrument measures 10 dimensions of classroom quality across three domains of interaction: Emotional Support, Classroom Organization and Instructional Support. Emotional Support includes: positive climate, negative climate, teacher sensitivity and regard for student perspectives. Classroom Organization includes: behaviour management, productivity and instructional learning formats. Instructional Support includes: concept development, quality of feedback and language modelling. Each dimension is characterised by several key indicators and behavioural markers, and is rated on a 7-point Likert-type scale. The CLASS manual provides exemplars for Low (1, 2), Mid (3, 4, 5) and High (6, 7) scores for each dimension, which are used to make an initial determination of the range of the score. During the observation, the observer takes note of the range, frequency, intent and tone of interpersonal and individual behaviours. Scores are assigned for each dimension during each cycle and then are averaged across cycles to create final dimension scores and an overall CLASS score.

Observation of activities in pre-school (OAP)

The Observation of Activities in Pre-school (OAP; Palacios and Lera 1991) is a time-sampling observational instrument developed to capture educational practices in a pre-school classroom. To complete the OAP, teachers and children are observed engaging in their typical activities inside and outside the classroom. The observer selects four children in the classroom to serve as target children for the observation, preferably two boys and two girls, and assigns each one a letter (A, B, C or D). At each time interval, the observer notes what is occurring in the classroom in respect to the teacher and the target child, starting with child A in the first cycle, moving to child

B in the second cycle and so on. This process is repeated for a maximum number of cycles. Data are recorded on an observation record sheet, which contains a checklist of eight items: *Location of child* (inside the classroom, outside the classroom but in the building, outside on the playground); *Format of activity or grouping* (whole group, small group, pair, alone); *Decision of the activity* (teacher, child, other); *Content of activity* (literacy, songs and music, dramatic play, construction toys, gross motor, etc.); *Type of activity* (structured, semistructured, free play, no activity); *Child's interactions with others* (cooperative play, collective play, solitary play); *Teacher's role* (giving information, correcting or helping, controlling or supervising, preparing or organising materials); and *Teacher's interactions with children* (whole group, small group, individual child, no interaction).

The OAP was adapted to align with the parallel use of the CLASS. Data were collected at the beginning of each CLASS cycle with intervals between observations lasting approximately 30 minutes. An average of nine cycles was completed during the 5-hour observation period, producing at least two observations of each selected child.

Piloting of measures

A local university developmental psychology professor and an ECE programme director from a *concertado* school in Seville reviewed the observational instruments for cultural sensitivity. They found no item culturally insensitive and concluded that the instruments would work well in the field.

All instruments and protocols were pilot-tested prior to data collection in a local *concertado* school that was not selected for participation. Two pre-school teachers agreed to participate in the pilot study. The principal investigator and author of this article, accompanied by a local university professor who was also trained on the instruments, visited the school on two separate occasions. The first round of pilot observations allowed for the testing of research protocols in the field. The second round of pilot observations confirmed inter-rater reliability on the measures and also tested the cultural sensitivity of the instruments. We achieved a consensus within 1 point on 90% of the ECERS-R items and on 83% of the individual CLASS ratings. We also achieved consensus across each individual dimension, such that our scores did not differ by two or more points more than once on a single dimension (e.g., behavior management). Subsequently, we discussed differences in scores to determine what evidence was used to assign the given scores, to ensure the instruments were being used properly.

After pilot testing, it was decided to drop one item on the ECERS-R that measures the provision of naps or rest time. Since school days ended at 1 or 2 p.m., at the start of the afternoon break time (i.e., *siesta*) when most locals went home to eat lunch and rest, it was not typical for pre-school programmes to offer an extended nap period. Scoring classrooms on what little rest periods they provided would lower their ECERS-R score. Thus, these data were collected but not used to calculate average scores.

Procedures

Once schools were recruited to participate, a day-long observation was scheduled for each participating class. Data were collected by the author, who was a trained

observer on all three observational assessments and fluent in Spanish. On an observation day, the observer arrived to greet the classroom teacher prior to children's arrival and stayed until their departure. Arrangements were made to interview the teacher and the ECE coordinator during the visit. Interviews generally occurred after school or during teachers' evening office hours, but in a few cases when teachers had limited availability, the interviews were completed during recess or a special activity (e.g., French class) when teachers were relieved of their classroom duties.

All interviews were conducted in Spanish and recorded for later translation. Prior to each interview, the interviewer obtained written consent from the teacher to participate in the interview and have the conversation recorded. Two teachers declined the use of the recorder, and thus only direct interviewer notes were used for coding and analysis. The consent form explained the purpose and benefits of the study, the requirements of the participant, and the participant's right to refuse any question and to withdraw from the study at any time. The form also described data security measures. Specifically, the participant was informed that all data would be kept confidential and not reported to anyone outside the research team, that the participant would be assigned a unique identification number and his or her name would never appear in any research materials, and lastly, that his or her data would be combined with those of other teachers and reported in summary format in any future presentations and publications.

Results

Descriptive statistics

School characteristics

We first ran descriptive statistics on some of the key characteristics of the 15 participating schools. During their interviews, ECE coordinators each reported on the socio-economic status (SES) of their school, whether it was generally considered 'high', 'average' or 'low' in relation to other schools in the city. Since schools were randomly selected and were located in different school zones across the city, they varied in SES. Six schools – three public and three *concertado* – were considered high SES and characterised by more educated and employed parents. Seven schools – five public and two *concertado* – were considered average SES. Two schools, both public, were considered low SES, because they were located in high poverty zones and the Ministry of Education had identified them as 'priority attention schools'.

Total school enrolment varied widely, ranging from 236 students in a smaller public school to 1400 in a larger *concertado* school ($M = 587.87$, $SD = 368.07$). The participating schools operated on average 5 hours per day for 40 weeks per year, following the school system calendar, with a 10-week summer break. Fourteen schools had a long morning schedule (9:00 a.m. to 2:00 p.m.) and one school had a divided morning and afternoon schedule (9:00 a.m. to 1:00 p.m. and 3:30 p.m. to 5:30 p.m.), which allowed children to go home for *siesta* before returning for the afternoon session. With the recent increase in the number of working mothers, as well as the number of local businesses that had converted to a western, 9-to-5 work schedule, most schools had begun offering after school lunch programmes and before and after school childcare. In addition, all but one school had after school extracurricular activities for pre-school students. The most common activities

included English (73%), dance (73%) and soccer (53%). Schools charged a sliding scale fee for these programmes, with the needs of low-income families being fully subsidised.

Seven schools (47%) had an assistant teacher who was shared among all ECE classes. Schools varied in their provision of foreign language, music, physical education and religion teachers for ECE. Nearly half of schools had an English teacher who rotated among ECE classrooms for instruction once or twice a week. Fewer schools had other specialists: music (27%), physical education (20%), religion (20%) and French (13%).

Classroom characteristics

Table 1 provides descriptive statistics on key classroom and teacher characteristics. The average class size based on enrolment was 25.36 (SD = 1.47). The maximum ratio for pre-school classrooms as set by local school administrators was 25 students to one teacher. For 'priority attention schools', the administration capped the class size at 22 children. Nine of the 25 participating classrooms (36%) were over the ratio limit, with three classrooms having 28 children. The majority of classrooms over ratio were in high SES schools, and more *concertado* than public schools experienced over-enrolment.

Fifty-six per cent of classrooms had at least one children identified as having a special need or developmental delay that required intervention or special services.

Table 1. Classroom characteristics ($N = 25$).

Classroom/teacher characteristic	M (%)	SD	Min	Max
Class size	25.36	1.47	22	28
Average observed teacher-child ratio (across CLASS waves)	1:20	1:5	1:8	1:27
Number of hours per week assistant present	2.71	1.41	2	5
At least one child with disability or developmental delay (%)	56			
Number of children with a disability or developmental delay	1.04	1.37	0	6
At least one immigrant child (%)	44			
Number of immigrant children	0.84	1.14	0	4
At least one child who is a non-native speaker (%)	28			
Number of children who are non-native speakers	0.48	0.87	0	3
Number of children in class who use school's lunch programme	10.68	5.41	3	20
Number of children in class who use school's before and after care programme	3.33	2.35	0	8
Number of children in class who participate in school's extracurricular activities	9.55	6.89	0	25
Female teacher (%)	96			
Highest degree (%)				
Teaching certificate (three-year college programme)	80			
Advanced degree in teaching (one additional year)	20			
Years of teaching experience	15.18	10.88	0.5	35
Years in current school	6.02	5.51	0.5	18
Monthly net income (Euros)	1718.91	233.65	1200	2100
Number of hours per week teacher works according to contract	30.29	3.23	25	42.5
Total hours per week teacher is at school including instruction, meetings, planning	35.10	3.95	30	47
Participation in professional development this year (%)	80			
Number of professional development trainings this year	1.64	1.29	0	4

Most of these cases dealt with language delays, but several cases were more severe, such as Down's syndrome and a physical disability that required the use of a wheelchair. Forty-four per cent of classrooms had at least one immigrant child and 28% had at least one child who spoke a home language other than Spanish. A large number of immigrant children were from Spanish-speaking countries in Central and South America. More students utilised the school lunch programme and extra-curricular activities than the before and after care programme; in some classes all or nearly all the children were enrolled in these programmes.

Teacher characteristics

All but one teacher was female. All teachers were college educated and held teaching certificates, and 20% held an additional degree in pedagogy. Teachers' years of experience ranged from less than 1 to 35 years, with an average of 15.18 years (SD = 10.88). Their average net earnings totalled 1700€ per month which was much higher than the national median gross income of approximately 1000 €/month. They were contracted (and paid) to work about 30 hours per week including 25 hours of instruction and 5 hours for office hours and staff meetings held after school. Teachers reported being at school for an average of 35.10 hours per week (SD = 3.95), including the time before and after school for planning, grading and attending meetings with staff and parents.

Eighty per cent of teachers reported having participated in a professional development training activity since the beginning of the school year (which equated to within the past six–nine months). Information and communication technology, language, literacy, music and mathematics were content areas in which most teachers had previously received training, whereas science education was the least covered content area. Specialty topics such as parent involvement, behavioural management and the education of second language learners were also rarely or never addressed in training.

When asked what type of training interested them most, teachers mentioned information technology as the area in which they had the greatest need for training (see Table 2). Other topics related to curricular content areas and teaching methods (e.g., literacy; constructivism) or social aspects of the classroom (e.g., classroom management; conflict resolution). The latter theme highlighted teachers' concern over class size and ratio; they stressed the need to learn better classroom management and understand children's social–emotional development in order to address problem behaviours within such a large group.

Classroom activities

Descriptive statistics on the OAP data were calculated to determine the frequency of occurrence of various activities during the observation period. The results showed that children spent approximately 81% of the day in the classroom, 17% of the day outside and the remaining 2% in other parts of the school building during transitions or restroom breaks. They engaged in teacher-selected activities 73% of the time and child-selected activities 27% of the time – including outdoor recess. The type of activity varied widely among structured activities (38%), semi-structured activities (23%), open activities (16%) and no activity (24%). About one-third of the day was spent in large or whole group activities. Half the day children were observed in small

Table 2. Professional development training topics that interest teachers most ($N=25$).

	<i>n</i>	%
Information technology	11	44
Classroom management	8	32
Social-emotional development/emotional intelligence	8	32
Literacy	7	28
Language development	5	20
Music education	4	16
Conflict resolution/problem behaviours	4	16
Mathematics	4	16
Childhood disorders and inclusion of children with special needs	3	12
Cognitive development	3	12
Art education	3	12
Diversity and cultural sensitivity	2	8
Constructivism	2	8

groups, which consisted primarily of children completing an activity independently while seated at desks or tables arranged in small groups – as opposed to working cooperatively in small groups. Two-thirds of all observed activities were parallel (i.e., all children were doing the same activity at the same time); cooperative play occurred 20% of the time and solitary activities another 20% of the time across observation periods.

Teachers performed a mix of activities: supervising (31%), instructing or giving information (28%), correcting work or helping (23%), preparing or organising materials (11%) and engaging in other tasks without children (9%). Most of the time teachers directed their attention to the whole class (45%) or to individual children (38%); there were fewer incidences of working with a small group (4%). Approximately 15% of the time teachers were not interacting with children, but rather were speaking with another adult or directing their attention to their own tasks (e.g., preparing materials while children worked).

Classroom quality

The results from the ECERS-R demonstrated that classrooms were generally poor in quality (Table 3). Sixty-eight per cent of classrooms scored an average below minimal standards and 32 per cent scored between ‘minimal’ and ‘good’. Although no classrooms scored at the extreme low end of completely inadequate, none scored in the excellent range.

On average, classrooms failed to meet minimal quality standards on four subscales: space and furnishings, personal care routines, activities and programme structure. Classrooms were too small to accommodate the number of students, had little furniture and equipment, and were not organised into centres with sufficient materials. Schools lacked space and developmentally appropriate equipment for indoor and outdoor gross motor activities. Health practices like hand washing were not always followed, restrooms were lacking in hygienic materials and cleanliness and children were not properly supervised or assisted during care routines such as toileting and meals. The majority of activities were not developmentally appropriate and often consisted of completing seatwork (e.g., colouring worksheets); little free play was observed.

Table 3. Descriptive statistics on measures of classroom quality.

	<i>M</i>	<i>SD</i>	Min	Max
ECERS	2.72	0.52	1.78	3.69
Space and furnishings	2.44	0.69	1.38	3.50
Personal care routines	1.90	0.49	1.00	2.80
Language and reasoning	3.08	1.16	1.00	5.50
Activities	2.05	0.62	1.22	3.30
Interaction	3.57	1.15	2.00	6.00
Programme structure	2.62	0.88	1.33	4.33
Parents and staff	3.99	0.76	3.00	5.50
CLASS	3.86	0.56	2.85	4.80
Emotional support	4.79	0.63	3.58	5.71
Positive climate	5.02	0.73	3.67	6.33
Negative climate	1.18	0.31	1.00	2.00
Teacher sensitivity	4.52	0.94	2.83	5.83
Respect for student perspectives	2.81	0.82	1.50	4.33
Classroom organisation	4.32	0.67	3.11	5.39
Behavioural management	4.61	0.92	2.83	6.33
Productivity	5.31	0.62	4.00	6.50
Instructional learning format	3.06	0.73	1.67	4.33
Instructional support	2.16	0.49	1.44	3.28
Concept development	1.85	0.45	1.17	2.83
Quality feedback	2.38	0.60	1.50	3.83
Language modelling	2.25	0.57	1.33	3.50

Note: Item is reverse-scored so a lower score indicates lower negative climate.

Classrooms scored higher on the subscales of language and reasoning, interaction and parents and staff. Some language and reasoning was observed, but conversations were often limited as teachers dealt primarily with giving basic instructions, correcting children and supervising. Teachers often expressed warm interactions with children, but interactions with individual children were limited given large class sizes, and children were not properly supervised during all parts of the day. On average, classrooms scored the highest on the subscale of parents and staff. All classrooms met at least the minimal standards for this subscale and 16% scored in the 'good range' by demonstrating positive communication with parents and collegiality among staff. Lack of personal space, resources and daily breaks for teachers lowered the score in many cases.

The CLASS offered additional information about observed process quality. The overall mean was in the middle range ($M = 3.86$, $SD = .56$), but there was a mix of high and low mean scores across the 10 dimensions (Table 3). On average, classrooms scored in the mid-to-high range on the broad domains of Emotional Climate and Classroom Organisation, and low on Instructional Support. Classrooms demonstrated very low negative climate (reverse scored). Positive climate and teacher sensitivity were scored on the high end of the middle range; however, respect for student perspectives was rated in the low range as a result of highly structured, teacher-driven activities. Classrooms were generally high on productivity, but behavioural management was average. Instructional learning formats was rated in the low end of the middle range as a result of the frequent use of only basic materials and a single modality during activities. Teachers demonstrated low concept development, quality of feedback and language modelling during instruction.

A series of multiple linear regression analyses were conducted to estimate the associations between various structural predictors of quality and observed classroom quality. Independent variables were added in three blocks. Block 1 included site (i.e., school identification number) as a covariate to control for any school effects since some classrooms were in the same school. Block 2 included school characteristics: type of school (public or *concertado*), school SES and total student population. Block 3 included classroom and teacher characteristics, including observed ratio, teacher education level, years of experience, participation in professional development training during the school year and the number of hours the teacher reported working on average each week. The ECERS-R and CLASS total scores and respective subscale/dimension scores were entered as dependent variables.

The results revealed few significant associations between the hypothesized predictors of classroom quality and observed classroom quality (Table 4). Only two variables – school type and child-teacher ratio – had significant associations with particular elements of quality. School type (1 = *concertado*, 0 = public) was negatively associated with space and furnishings, but positively associated with personal care routines. Specifically, *concertado* schools scored lower than public schools on physical classroom quality, but demonstrated better care of children's basic needs. Observed child-teacher ratio was negatively related to personal care routines, quality of feedback and language modelling. Classrooms with larger numbers of children per teacher scored lower on these dimensions of care and instruction.

Qualitative analyses of interview data

The semi-structured interviews with ECE coordinators and classroom teachers included several open-ended questions that gathered the participants' perspectives on pre-school education and their roles as educators. Teachers' rich descriptions provide supporting qualitative evidence that gives explanation to the quantitative findings. The data produced from these items were analysed using NVivo 9.0 software to identify and code similar themes across participants.

ECE coordinators

During their interviews, ECE coordinators were asked: *What are the challenges, if any, that you have experienced in implementing universal pre-school in your school?* Five themes emerged from the data across the 15 ECE coordinators. The summarised results presented herein refer to *the majority* when 60% or more of participants ($n \geq 9$) described the theme, *half* refers to 47–53% of participants ($n = 7$ or 8), *some* refers to 27–40% of participants ($n = 4$ –6), and *a few* refers to 20% of participants or less ($n \leq 3$).

1. *Having to change teaching practices as a result of increased class sizes and policy changes.* The majority of ECE coordinators discussed how teachers in their schools had to adapt their teaching practices due to both increased class sizes when pre-school became universal and the enrolment of younger children into the school. One coordinator described how teachers in her school relied on lesson books with worksheet activities in conjunction with centre-based activities as a way of maintaining control:

We work on class activities in centers, or at least we try to work in this way. To me, I'd like to work more in this way, but the truth is, with such a high ratio and large number

Table 4. Standardised regression coefficients for associations between school, classroom and teacher characteristics and quality measures.

	ECERS-R								CLASS										
	Total	SF	PCR	LR	ACT	INT	STR	PS	Total	PC	NC	TS	RSP	BM	PR	ILF	CD	QF	LM
School type (1 = <i>Concertado</i>)	-0.17	-0.68**	0.73**	-0.31	-0.50	0.11	-0.16	0.45	-0.18	-0.14	0.42	-0.17	-0.33	0.05	-0.01	-0.20	-0.24	-0.34	-0.35
School SES	-0.14	-0.03	-0.14	-0.02	-0.24	-0.05	-0.17	-0.00	-0.26	-0.10	-0.41	-0.31	-0.27	-0.44	-0.33	-0.14	0.24	-0.14	-0.14
School size	0.16	0.07	-0.32	0.28	0.26	-0.09	0.34	0.11	0.25	0.01	-0.26	0.21	0.48	0.15	0.10	0.31	-0.03	0.32	0.46
Child: teacher ratio	-0.54	-0.13	-0.68*	-0.54	-0.33	-0.29	-0.16	-0.44	-0.51	-0.23	-0.17	-0.38	-0.56	-0.32	-0.25	-0.57	-0.44	-0.59*	-0.68**
Teacher education	-0.05	-0.17	-0.10	0.07	-0.19	0.16	-0.04	-0.00	0.03	0.05	0.36	0.25	0.10	-0.09	0.09	-0.08	-0.14	-0.10	-0.21
Teacher experience (years)	-0.06	-0.19	-0.10	0.08	0.17	0.10	-0.18	-0.39	0.04	-0.03	-0.09	-0.01	-0.13	0.16	0.04	0.10	-0.03	0.26	-0.02
Professional development in past year	0.09	-0.15	0.31	0.02	0.03	-0.08	0.16	0.25	-0.03	-0.19	-0.38	-0.24	0.13	-0.10	-0.15	0.11	0.16	0.17	0.24
Number of hours/week teacher works	0.09	.00	-0.02	0.22	0.07	0.14	-0.06	-0.03	0.11	0.09	-0.35	-0.03	0.10	0.16	-0.07	0.07	0.22	0.24	0.33

Note: SF=space and furnishings; PCR=personal care routines; LR=language and reasoning; ACT=activities; INT=interaction; STR=programme structure; PS=parents and staff; PC=positive climate; NC=negative climate; TS=teacher sensitivity; RSP=regard for student perspectives; BM=behavioral management; PR=productivity; ILF=instructional learning format; CD=concept development; QF=quality of feedback; LM=language modeling.

* $p < .10$, ** $p < .05$

of children . . . and well, also in this zone the children are more difficult and have a lot of problems . . . the truth is it takes a lot of work because we don't have enough assistance. And so, to have a little bit of order and so they are able to hear everything, you also have to work with the lesson books. When you're done, you can work on activities with a small group or one child and not with the whole group.

Coordinators explained the reason for the over-enrolment was that local judges mandated schools to enrol children who were low income or at risk (e.g., from a single-parent household). The local administration typically placed these children in higher performing schools. Even if a school was at full capacity, additional children may have been enrolled if they were assessed to be 'at risk':

The ratio is awful. Really bad. You can't work with so many children. Some children are mandated directly by the local judge and the judge doesn't realize how many children are already here and what space there is . . . There's not supposed to be more than 25 and you really take note of it with the high number of children.

In addition, some schools accepted more children than their enrolment capacity because they did not want to leave children out, particularly siblings of current students. Children who were rejected from their top choices were often assigned a school located a long distance from their home, which caused some families to delay enrolment for a year and sometimes temporarily enrol children in a childcare centre with younger children.

The large class size was seen as particularly problematic because of the young age of the children. Since enrolment was determined by year of birth, children entering the three-year-old classroom at the start of the school year in September were as young as 2.5 years old and sometimes were not yet toilet trained. The fact that children with special needs were fully integrated in the classrooms without the addition of a support teacher was also challenging.

2. *Transitioning to provide pre-school in existing facilities.* Some ECE coordinators discussed the challenges they experienced when first implementing pre-school in their schools or transitioning to expand their existing programme to accommodate additional children:

In old schools like this one, we have another problem which is the issue of the installations. We don't have an adequate playground for early childhood, with all its equipment, nor restrooms for early childhood. Also, the restrooms we have we share with children in primary, which isn't adequate either. In the new schools, they have restrooms inside the classrooms . . . Therefore, here, like many of the older schools, we don't have conditions that are adequate for early childhood.

3. *Pre-school not mandatory and not valued.* Although pre-school was offered as a universal programme, some ECE coordinators discussed how both the school administration and many parents did not value it the same as primary education, because the programme was not mandatory. ECE was given less funding and less attention from school leadership. Some parents viewed pre-school as free childcare and not school, and undervalued teachers' roles as educators:

Man, well, the truth is that I think that in all of Spain, and especially here in Andalusia, early childhood education is the poor brother of the school. Last year they approved the new law, the LOE, with a new curriculum for preschool that caused a lot of changes. For example, English isn't mandatory in the school, nor music. The music teacher is

only for primary not early childhood. And the physical education teacher we think should be teaching psychomotor development, and he doesn't either, because this stage of early childhood education isn't considered mandatory. And for that reason, we see that it's not given the importance that it deserves.

4. *Stressful relationships with parents.* Some ECE coordinators described how parents were challenging to work with because they demanded so much from teachers and were overprotective of their children – who were still so young and dependent on their caregivers:

But perhaps another challenge, in an environment like ours, is to get the parents of these children used to the idea that they have to protect them less and leave them in our hands. Perhaps this is something we are also dealing with right now; it's a great challenge for us, especially with children at this age. The parents are right on top of them. It's good in a certain sense, but later for other things... well, it isn't good for everyone.

5. *Lack of resources and staff.* The challenge with large ratios was a prominent theme, which included large class sizes as previously discussed, but also the lack of staff to support those children. Some ECE coordinators discussed the challenge of implementing pre-school without a sufficient number of staff, including content specialists, assistants to help in the classroom and attend to children with special needs, and monitors to supervise children outside the classroom in hallways and bathrooms:

We really need an instructional assistant—but this doesn't depend on the teachers or the school—it depends on the school board, and in this case, of Andalusia. And now that we're experiencing the deficit that we are, it's impossible. Back in the day, when I first started, the school was private and there was an assistant, because the money came from the parents. But now that we're a state-assisted school it depends on the school board—and we can't count on what they give us.

ECE coordinators were then asked: *What would you need to improve pre-school education in your school?* Based on the challenges they faced, coordinators reported various things that would help them improve programme quality in their schools. Six main themes emerged, which are presented in descending order of frequency:

1. More teaching and support staff;
2. Smaller class sizes;
3. Better building facilities, including more classroom space, a restroom in the classroom and a playground;
4. More physical resources and materials;
5. Better teacher training; and
6. More support from the administration.

The overwhelming majority of ECE coordinators expressed the critical need for additional staff – both classroom teachers, which would reduce the student: teacher ratio, and support staff. Appropriate staffing was considered most important among the various components they believed were essential to improving the quality of ECE in their schools.

Pre-school classroom teachers

Teachers were asked several questions about their experiences as educators, the challenges they had faced, and their perspectives towards pre-school education in Spain. Similar themes were identified across the 25 teachers' responses. In the results presented here, the term *majority* refers to 56% or more of participants ($n \geq 14$), *half* refers to 44–52% ($n = 11–13$), *some* refers to 20–40% ($n = 5–10$), and *a few* refers to 16% or less ($n \leq 4$).

Benefits of a pre-school education. The first set of themes described the benefits of a pre-school education for young children. Four key themes were found.

1. *Socialisation and learning opportunities.* The majority of classroom teachers described the importance of a pre-school education for children's social development. Teachers believed that children at that age needed to be with their peers to learn how to share and play, and that such an opportunity was better than being at home where children did not get the stimulation they needed:

Put simply, the opportunity that you give them to socialize with their peers—that is fundamental. Because you notice it so much when a child comes from his home without ever being in school before. He has a lot of doubts, a lot of needs; he's always more exhausted, shy, doesn't know how to think for himself, stand up for himself, doesn't know how to play with others, doesn't know how to share, doesn't know how to socialize. Therefore, it's fundamental—I view it as fundamental. I think [preschool education] is almost necessary, even though it may be voluntary, but for certain aspects of early childhood development, I see it as necessary.

2. *Fundamental to early development.* Some teachers commented on how fundamental a good ECE is for children's development, particularly the development of language. They pointed out how important the first five years of life are for children's brain development and learning of basic skills, and how society should take advantage of children's capacity to learn at that age by providing them with an academic environment that fosters those skills. Otherwise, they felt society would be doing a disservice to its own future well-being.

3. *Preparation for primary school.* Some teachers believed a significant benefit of a pre-school education was that children were better prepared for primary school. Children would learn the school rules and routines and the basic skills in reading and mathematics, which would make the transition to first grade much easier. They could not imagine children starting school at age 6; it would be too difficult for children to learn without having that prior school experience.

4. *Reduces socio-economic inequalities.* A few teachers – including the two from low SES schools – considered a pre-school education as most beneficial for children from low-income families facing material hardship and instability. They felt that, although pre-school is good for all children, it offers low-income children unique learning opportunities that have the potential to reduce the achievement gap. Pre-school also provides a safe, healthy environment away from the stress and chaos found in low-income homes:

I believe it's a very important stage. Yes, it's the truth that the ratio is very high. This is something that we fail on, but also there are many deficiencies in the children. . . I have children whose parents don't come in, who have to work. They leave them in the before and after care program and return for them at 5 or 6 in the evening. So, you as a teacher

you think perhaps they can receive a little bit of attention from you, even though there are a lot of children, because they are missing some of that from their parents. They are obviously two very different things, because a teacher is not the same as the family, but, well, I think that it helps balance out certain things such as the socioeconomic effect.

Dislikes and challenges. The second set of themes dealt with the challenges teachers faced in their role as educators. Seven themes emerged from teachers' responses which aligned closely with comments from the ECE coordinators. They described things they did not like about their jobs, things they wanted to change if they could and problems they saw in general with the implementation of pre-school education in their schools.

1. Large class size and ratio. The majority of teachers described the challenges they experienced with having such large class sizes and inappropriate ratios of children to staff. They felt they could not sufficiently manage their classes with so many children and were not able to meet children's individual needs. They also felt limited with the activities they could do with such a large group. Some teachers described experiencing 'burn-out' and even symptoms of depression because they felt powerless:

What really needs to change is the ratio. For me, above everything, the ratio. This is fundamental. Because when we are missing a few children, because they are sick and absent, and we have 18 or 19 children, we're in heaven. Everything is more relaxed and under control. There's less noise. We're able to provide activities for them and work with them directly and more individually. I mean, what can I say, it works so much better. The children are more attentive, and psychologically and pedagogically, you are much more effective. But with 26 or 28 children—whatever they can fit—and one person, with the little support that we have, it will make you go crazy. You really go crazy! And it makes you really depressed. And nowadays, it's just exhausting because a lot of the children have problems—not severe problems, but you have children with bad behavior and they require a lot of individual attention. You always have to have your eye on them . . . You have one that's really hyper. You have one that is really slow and needs encouragement. You have another that's a little immature and you have to help him . . . So, the worst is the ratio.

2. Lack of support staff. The majority of teachers felt strained by the lack of support staff and wished they had their own assistant teacher to help them in the classroom and/or a hallway monitor who could help with supervision. Those teachers who did have an assistant for a few hours a week (and shared her with other pre-school classrooms) explained that the assistant was frequently called upon to substitute, so in the end, they did not get the support they were supposed to receive. If they had someone to assist with children with special needs, teachers believed they could better meet the needs of the rest of the group and have more flexibility in their activities.

3. Administration and bureaucracy; lack of respect for ECE. Half of the teachers revealed the burden of dealing with their school administration and the bureaucracy within the system. Specific issues of concern included having to complete unnecessary paperwork on their own time, not having any breaks during the day to plan or relieve themselves, and the shortening of recess time and removal of rest time in pre-school. In many ways, they felt disrespected and that the administration

did not care about them or the children since the local boards were increasing class sizes without adding resources. Some stressed how even though pre-school was subsidised by the government, funding was still insufficient, and the programme was not valued in the same way as primary and secondary education:

I wish I didn't have to deal with so much of the bureaucracy—the paperwork and administrative issues that take up an absurd amount of time, because it's time that we're not dedicating to, for example, reflecting on our instruction, or making lesson plans together, or training ourselves in a specific topic that we find very important. I don't like it that they use the planning time of the teacher like this. . . . And also, I believe it doesn't help much, all of the rules that the administration creates that have very little in common with what really happens in the school, because in reality, everything they do is always very politicized. For example, they just ended or just created a rule that will end the rest period for three-year-old classrooms, which is very important for a lot of children and families—and for the teachers. . . . So, in the end, I don't know. I think a lot of the problems are with our own administration. And it isn't that I want to say that the administration is at fault for everything, no. . . . But the truth is they don't help a lot—they don't help.

4. *Poor school facilities and resources.* The lack of material resources and developmentally appropriate equipment and facilities (e.g., playground; restrooms) for early childhood were problems for some teachers. Classroom toys were often scarce and those they had were older and broken. Schools gave the pre-school staff a lump sum of spending money each year that was divided among classrooms, but it was not sufficient to outfit a classroom. Some teachers used their own personal money to buy books and materials. In most schools, parents paid a small annual fee that was used to supplement classroom materials and to buy basic care items like toilet paper, soap and paper towels, which the schools often could not afford for all students for the whole school year.

5. *Problems with families.* Some teachers were troubled by either uninvolved or over-involved parents. In both cases, teachers felt parents had a misconception of pre-school education and did not respect them as educators. Some parents were not engaged in children's learning and viewed teachers more as babysitters; other parents were very involved in their children's education and repeatedly complained to teachers to get them to do more. Teachers expressed much frustration working with these parents.

6. *Lack of teacher preparation and coordinated professional development.* A few teachers wished their university had better trained them for the demands of teaching. Some felt their training had been too focused on theory and not practice, and training in specific content areas was limited. One specifically described the challenge of coordinating professional development training, because teachers had to attend trainings on their own time and not during the school day. They felt professional development was not successful unless all teachers attended since teachers planned as a group, and one teacher alone could not change the group methodology.

7. *Rigid curriculum and teaching methodology.* A few teachers voiced their opinions against the rigid teaching methodology their schools implemented. They did not like working with lesson books but preferred a centre-based or project-based approach to

teaching. Yet they felt constrained to follow a particular methodology since the team of pre-school teachers coordinated lessons as a group and one teacher could not stray from the rest. One teacher described not feeling motivated to teach because the methodology her school used was against how she was trained and what she believed was best:

Yes, I think preschool education is really important, but what's also important is the training we receive. We need an alternative from the traditional, because right now, I see a school that appears to operate like it's in the 18th century and things continue like so.

And I see it as much harder in the primary grades to implement these sorts of changes. I don't view the period of early childhood like what we sometimes refer to in slang as "on their bottoms" meaning the children are seated all day long doing worksheets. For me, this is a convenient method for early childhood, not a method that stimulates the learning and development of children. So, yes, I defend the idea of early education, but with, like I have said, a fundamental focus on the child, and the stimulation of development . . . You'd think it would be like this, and could be, but it requires a strong economic investment.

Discussion

A high-quality pre-school education can have positive impacts on children's development and learning, and prepare them socially, emotionally and cognitively for the transition to school. The Spanish Government recognised the importance of this sensitive period of development in its passing of the Constitutional Law of Education in 2006, which mandated local governments to provide a free pre-school education to all children who wanted to enrol. The country now provides subsidised educational services to nearly 100% of children three to five years old – more than any other European country. Yet this enormous achievement has been met with various challenges, as strained resources in certain regions have reduced the quality of children's educational experiences.

The current study took a mixed-methods approach to examine the characteristics and quality of pre-school education in Seville, Spain with the goal of understanding some of the underlying challenges schools and teachers are facing. The combination of three observational tools – that assessed physical classroom quality, the quality of activities and the quality of teacher–child interactions and instruction – offered a clear picture that pre-school classrooms in Seville are lacking in many domains. However, to determine the reason for such insufficiencies, qualitative data from interviews with school ECE coordinators and classroom teachers were analysed to uncover explanations and give meaning to the quantitative findings. The richness of teachers' stories detail the challenges they faced with increasing class sizes and a lack of physical and human resources, within an environment that undervalued and misunderstood the purpose of ECE. The key themes identified, coupled with the quantitative findings, point to areas that are in critical need of attention to improve classroom quality in these schools. The findings also highlight lessons learned when expanding a pre-school programme to serve all children and the fundamental components necessary for successful implementation.

Benefits of a pre-school education

Within the goals of this study, it was important to understand teachers' perspectives on the purpose of ECE for children three to five years old and the benefits an early education can have on children. Identifying where teachers stood as far as their knowledge of child development, and how their teaching could impact children, helped interpret the classroom quality data. All teachers highlighted how fundamental a good pre-school education is for all children, particularly low-income children. They offered several important reasons why.

First and foremost, pre-school offered opportunities for socialisation with other children and the development of interpersonal skills, emotional regulation and social competence. The idea of pre-school being better than the alternative – 'being at home with grandma' – was quite common. Second, pre-school supported children's early development. Teachers viewed the first five years of life as critical for the development of language and basic skills, and described children to be 'like sponges' – absorbing everything around them. Third, teachers considered pre-school essential for success in primary school and could not imagine children starting first grade without having those school readiness skills – both social and academic. Last, teachers believed that early learning opportunities offered in pre-school were most significant for low-income children and could potentially narrow the achievement gap.

These findings indicate that most teachers had a good understanding of the benefits of pre-school education on children's development. In particular, they regarded socialisation as most important for children at this age and understood how their teaching could foster children's development of various skills. Teachers liked having the same group of children for three consecutive years, because they could form a closer attachment with them and see them develop over time. Yet, even though teachers had a good understanding of children's capacity to learn and their need for socialisation during the pre-school years, these perspectives were not always reflected in their teaching and interactions.

Classroom quality in need of improvement

In the current study, each classroom was observed for one full school day to gather detailed data on the activities and interactions that occurred. The results show that children spent the majority of the day either in a large group or seated in small groups doing structured, parallel and teacher-selected activities involving writing, drawing or other fine motor skills. Few activities were cooperative or involved science, dramatic play or block play. ECERS-R ratings were near or below the threshold for minimal quality, primarily due to the lack of space and furnishings, materials and developmentally appropriate activities. Even though the observed environments were poorly resourced, interactions between teachers and children and between children were largely positive. Most classes scored in the mid-to-high range on positive climate on the CLASS as well as low on negative climate. However, few observed interactions involved questions, explanations and reasoning that are characteristic of a high-quality learning environment. Classes were mostly productive – meaning children were kept busy – but the instructional format and regard for student perspectives were generally limited. Teachers also had difficulty with classroom management and supervision given the high child–teacher ratio.

The findings from the classroom observations support previous research on the quality of pre-school education in Spain, and specifically in Seville (Lera 1996; Palacios, Lera, and Oliva 1995). Low classroom quality was apparent in several studies from the 1990s, and the current findings indicate that the quality has remained low and may have actually decreased since that time.

The results of the regression analyses show that few structural characteristics of the schools and classrooms were related to classroom quality. Classrooms in *concertado* schools generally had a smaller space and fewer furnishings but demonstrated better care of children's basic needs. These differences may be a result of *concertado* schools being faith-based facilities that had few operational resources but strong values towards serving children and families.

Most significantly, the observed child-teacher ratio was negatively related to personal care routines, quality of feedback and language modelling. Ratio basically equated to class size since each classroom had only one assigned teacher; however, in some occasions, an assistant teacher, an intern or a content specialist was present, which lowered the observed ratio captured by the CLASS. With a large number of children within their care, most teachers were not observed providing appropriate care and supervision to all children. Greetings at arrivals and departures were not smooth and positive, meal times were rushed and chaotic and restrooms were not appropriately equipped and supervised. In addition to not meeting basic care needs, teachers who were alone with large groups provided limited feedback to children during instruction and had few discussions that expanded children's language and vocabulary. Teachers with smaller groups were observed providing more individual attention and having longer and more elaborate conversations with children.

Teacher-child ratio as the largest barrier

A key theme that surfaced from interviews with teachers and ECE coordinators was the issue of over-enrolment and large class sizes. The stories they told about not being able to handle so many children and having to adapt their teaching methodology to accommodate extra children in their classrooms was supported by observational evidence. The ratio of 25 children to one teacher is still considered high by early education standards of developmentally appropriate practice; the recommended ratio for three- to five-year-old children is one adult for every 10 children (Kostelnik, Soderman, and Whiren 1993). However, cultural differences in what is considered appropriate must be recognised. Some teachers thought a ratio closer to 20:1 would be reasonable. The issue teachers were most concerned with was the lack of accountability and enforcement of the ratio – and the oversight or indifference on the part of the administration. Teachers helped to explain the reason for the high ratios – specifically how local judges mandated the enrolment of at-risk children and how some schools bent the rules to be fair to families. The large class sizes and lack of support staff affected teachers physically and psychologically, and hindered their ability to do their jobs well.

Pre-school equal to but unique from primary grades

Pre-school programmes in this study were all located within local school buildings, both public and private, and were administered as part of the local school system similar to other grade levels. Pre-school education developed over the years as a

downward extension of primary education and, accordingly, pre-school classrooms operated similarly to primary grade classrooms. All children in a given class were the same age and started school as a cohort. The majority of class time was spent in whole group instruction and completing individual seatwork. In addition, teachers often used traditional approaches to instruction, including the use of lesson books.

Although pre-school classrooms appeared similar in structure to primary classrooms, teacher in this study indicated that, in reality, pre-school education was undervalued and underfunded in comparison to primary. In fact, a key theme among ECE coordinators and teachers was that the purpose of pre-school was often misunderstood by the school administration and the parents of their students. Teachers felt that their school directors did not value pre-school education because it was not mandatory, and both the administration and parents treated it like ‘a parking lot’ for children. Administrators overenrolled each class without adding resources and staff support, and overburdened teachers by assigning extra paperwork, removing rest time and planning time, and shortening recess. Primary education received priority as far as funding and content specialists. In addition, according to some teachers, parents viewed pre-school as childcare, not education, and wanted more hours in school – a request to which the schools have responded. Therefore, teachers believed the quality of their classrooms was often out of their hands and there was not much they could do to change it.

Similarly, some teachers acknowledged that their teaching methods were not appropriate for the age group, but they felt discouraged from changing their methods for several reasons. First, large class sizes and the lack of teaching assistants prevented them from doing more with centre-based and small group activities. They sometimes relied on lesson books to maintain control of their classes and to keep children seated, quiet and productive. Teachers also lacked materials to do interactive and ‘fun’ activities with art and science. In addition, younger teachers often discussed how they were trained in more progressive teaching methods and wanted to implement them in their classes, but they were obligated to follow the regimented curricular plan determined by their staff team. Thus, teachers may have had the training and motivation to do a lot more than what was observed.

Limitations

As with any study, there are several limitations to consider. First, the present study included 25 classrooms from a random sample of 10% of schools in Seville with a pre-school programme. Although the schools were representative of those in Seville, the sample was relatively small and so findings must be interpreted within that context. Second, the findings are not generalisable to all pre-school programmes in Spain but only those in Seville since programme quality may vary by region.

Third, classroom observations were conducted by a single observer at a single point in time and may not reflect the quality children experience on a regular basis. Observations were extended to the full school day – more than what is required by the instruments’ developers – to compensate for this methodology. Moreover, having a consistent observer for all observations eliminated any potential issues with inter-rater reliability. However, readers should be aware that data were collected over the course of 5 months from late January through early June 2010, so there was some variation in classroom activities due to the season and academic calendar.

Implications for policy and practice

The study findings provide lessons learned about implementing a universal pre-school system that have the potential to educate policy-makers and school administrators. First, teachers emphasized the importance of a high-quality pre-school education for children's development and learning, and that such a programme must be valued by society and funded appropriately to be successful. Most importantly, the results highlight the need for sufficient financing for pre-school programmes in order to maintain appropriate staffing and high-quality standards. Teachers in this sample were all college educated and were paid the same as teachers in primary and secondary education, which was beneficial for quality and solidarity. The challenge was that administrators failed to recognise the unique needs of pre-school children, and in fact, gave unequal attention and disproportionate funding to pre-school and primary programmes. The results suggest that pre-school education should be recognised as just as important as primary education, but also different, in that children are much more dependent on their caregivers, require additional support and supervision, and need distinct equipment and learning materials.

Additionally, the findings have implications for ECE teacher preparation and professional development programmes. Teachers in this study described their need for better pre-service and in-service training, particularly related to technology in the classroom, classroom management, social-emotional development and literacy. Using tools like the ECERS-R and CLASS as self-assessment tools may be useful guides for teachers who are exploring ways to improve their classroom organisation, structure and activities.

Acknowledgements

The author would like to thank the Spanish Fulbright Commission for their generous support of this project. Many thanks to Dr. María José Lera Rodríguez, Associate Professor of Developmental and Educational Psychology at the University of Seville, for her mentoring and guidance in the field. Also, this study would not have been possible without the schools, teachers, parents and students who participated in the study observations and interviews.

Notes

1. In this article, the term 'early childhood education' is used to refer more broadly to the education of children 0–6 years whereas 'preschool' is used to differentiate the education programme for children 3–6 years old.
2. Class size is locally determined. The autonomous community of Andalusia set the class size to 25 students, but in other communities, this number is as low as 20.

References

- Cryer, D., W. Tietze, M. Burchinal, T. Leal, and J. Palacios. 1999. Predicting process quality from structural quality in preschool programs: A cross-country comparison. *Early Childhood Research Quarterly* 14, no. 3: 339–61.
- Fernández Gutiérrez, J.A., M.A. González Puga, M.D. Requena Balmaseda, and P. Sainz de Vicuña. 2003. *Didáctica de la educación infantil* [The art of teaching early childhood education]. Madrid: Editorial Editex.
- Harms, T., R.M. Clifford, and D. Cryer. 1998. *Early childhood environment rating scale*. Rev. ed. New York: Teachers College Press.

- Howes, C., M. Burchinal, R. Pianta, D. Bryant, D. Early, R. Clifford, and O. Barbarin. 2008. Ready to learn? Children's pre-academic achievement in prekindergarten programs. *Early Childhood Research Quarterly* 23: 27–50.
- Institute of Evaluation. 2007. *PISA 2006: Programme for international student assessment – Spanish report*. Madrid: Spanish Ministry of Education and Science.
- Institute of Evaluation. 2010. *National system of education indicators, 2010 edition*. Madrid: Ministry of Education.
- Kostelnik, M.J., A.K. Soderman, and A.P. Whiren. 1993. *Developmentally appropriate programs in early childhood education*. New York: Merrill.
- Lera, M.J. 1996. Education under five in Spain: A study of preschool classes in Seville. *European Journal of Psychology of Education* 11, no. 2: 139–50.
- Lera Rodriguez, M.J. 2007. Quality of early childhood education: Evaluation instruments. *Revista de Educación* 343: 301–23.
- Ministry of Education of Andalusia. 2008. *Regulation of August 5, 2008, for developing the curriculum appropriate for early childhood education in Andalusia*. Seville: Ministry of Education of Andalusia.
- Montie, J.E., Z. Xiang, and L.J. Schweinhart. 2006. Preschool experience in 10 countries: Cognitive and language performance at age 7. *Early Childhood Research Quarterly* 21: 313–31.
- Palacios, J. 1998. Niños y niñas de 4 años en España [Four-year-old children in Spain]. *Cuadernos de Pedagogía* 274: 42–5.
- Palacios, J., and M.J. Lera. 1991. *Observation of activities in preschool*. Unpublished report. University of Seville.
- Palacios, J., M.J. Lera, and A. Oliva. 1995. Quality of child care in Spain. In *Quality of child care: International perspectives*, ed. W.E. Fthenakis and M.R. Textor, 191–9. Berlin: Beltz.
- Pianta, R., C. Howes, M. Burchinal, D. Bryant, R. Clifford, D. Early, and O. Barbarin. 2005. Features of pre-kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science* 9, no. 3: 144–59.
- Pianta, R.C., K.M. La Paro, and B.K. Hamre. 2008. *Classroom assessment scoring system: Manual pre-k*. Baltimore: Brookes Publishing.
- Tietze, W., D. Creer, J. Bairrao, J. Palacios, and G. Wetzel. 1996. Comparisons of observed process quality in early child care and education programs in five countries. *Early Childhood Research Quarterly* 11: 447–75.
- Tietze, W., J. Hundertmark-Mayser, and H. Rossbach. 1997. European child care and education study: Cross national analyses of the quality and effects of early childhood programmes on children's development. Final report for work package #1. Submitted to the European Union DG XII: Science, Research and Development RTD Action: Targeted Socio-Economic Research, November 30, 1997.
- Tietze, W., J. Hundertmark-Mayser, and H. Rossbach. 1999. European child care and education study: School-age assessment of child development: Long-term impact of pre-school experiences on school success and family-school relationships. Final report for work package #2. Submitted to the European Union DG XII: Science, Research and Development RTD Action: Targeted Socio-Economic Research, December 31, 1999.