

# Quality early childhood education in Costa Rica? Policy, practice, outcomes and challenges

Andrea Rolla San Francisco<sup>\*a</sup>, Melissa Arias<sup>b</sup> and Renata Villers<sup>b</sup>

<sup>a</sup>Harvard University Graduate School of Education, Santiago, Chile; <sup>b</sup>Association Amigos del Aprendizaje, San José, Costa Rica

High-quality early childhood education has been shown to improve school outcomes in several developing and developed nations. The history of policy around pre-school education in Costa Rica is described as background to presenting cross-sectional data on the emergent literacy skills of low-income Costa Rican children in kindergarten, 1st and 2nd grade from six schools ( $n=335$ ). These data suggest that Costa Rican children show rather limited emergent literacy knowledge at the end of kindergarten. In addition, instruction in nine kindergarten classrooms is described and evaluated in order to provide vignettes of educational practice. The need for developmentally appropriate practice around emergent literacy skills and articulation with 1st grade is discussed and appropriate professional development is called for.

Keywords:

1

## The importance of quality pre-school education: an international perspective

High-quality pre-school education has an important impact on cognitive and socio-emotional development (Bowman *et al.*, 2000; Sylva *et al.*, 2003). In addition, high-quality pre-school education has a positive influence on children's later academic achievement and on the prevention of learning disabilities, while reducing behaviour problems and levels of incarceration, in both the short and long term (NICHD Early Child Care Network, 2003; Sylva *et al.*, 2003; Boocock, 1995).

Defining a high-quality pre-school educational programme is not straightforward. There is no curriculum that has been shown to be superior internationally (Boocock, 1995); however, there are certain characteristics of quality programmes that appear to be universal. For example, the use of pedagogical practices that are developmentally appropriate appears to have a positive influence on language and

---

\*Corresponding author: Harvard University Graduate School of Education, Gertrudis Echeñique 215, No. 22, Las Condes, Santiago, Chile. Email: arollasf@post.harvard.edu

cognitive development. The quality of the relationships between teachers and their students is related to socio-emotional development (NICHD Early Child Care Research Network, 2003; Sylva *et al.*, 2003). Emergent literacy research in the USA, Chilean and Mexican contexts has also provided empirical evidence that such emergent literacy skills as vocabulary, letter identification, phonological awareness and concepts about print are related to reading comprehension and initial and later school success (Snow *et al.*, 1998; Vernon, 2001; Villalón *et al.*, 2003). Thus it seems likely that pre-school programmes that incorporate attention to these domains of knowledge will improve children's long-term outcomes. 2

Of the many component capacities that contribute to literacy success, most are often acquired informally through oral language activities and exposure to meaningful texts that are motivating for young children. Some capacities, in addition, benefit from more structured presentations—in particular, for children living in low-literacy families where they do not receive as much informal exposure to rich language and literacy activities as children from high-literacy families. Ideally, however, all exposure to emergent literacy should be developmentally appropriate and meaningful for the individual child, regardless of the specific activity (NAEYC & IRA, 1998; NAEYC, 1993). Children should be exposed to rich language use, multiple forms of oral discourses and written texts, and curricula that are flexible enough to adapt to children's individual levels of development (Snow *et al.*, 1998).

### **The Costa Rican context: increased access to kindergarten with limited attention to emergent literacy and little articulation with 1st grade**

Costa Rica is a small, politically stable country located in Central America which has always prided itself on its educational system. There has been increased access to pre-school, in particular, kindergarten, in Costa Rica. In 2003, 91% of eligible children between 5.5 and 6.5 years of age attended kindergarten (Ministerio de Educación Pública, 2003). In 1990 *Juego-trabajo* (the literal translation is Play-work) was established in Costa Rica as the official method of instruction in kindergarten (Ministerio de Educación Pública, 2002). *Juego-Trabajo* as a methodology consists of a cycle of planning, action and reflection by both teachers and children about their activities in centres in the classroom; this kind of methodology, similar to the methods used in the High/Scope pre-school programmes developed in the 1960s in the USA (Schweinhart, 2003), has been found to be beneficial for young children, particularly those at risk of later academic difficulties (Epstein, 2003).

There has been little systematic work on relating the teaching of emergent literacy skills to student outcomes on standardised tests. A review of the literature from the major sources for research in pre-school education in Costa Rica (the Institute for the Improvement of Education in Costa Rica and the Faculty of Education, both of the University of Costa Rica, and the Pre-school Department and Curricular Division at the Ministry of Public Education) yielded no quantitative studies examining the relationships between teacher pedagogy and student outcomes in emergent literacy.

Pre-school education has traditionally been divorced from elementary school education in many countries throughout the world (La Paro *et al.*, 2000; Yeboah, 2002); this lack of articulation has been noted in the Costa Rican context as well (Ugalde, 1995; Chaves, 2001). Therefore, when the objectives of pre-school education are considered, there has typically been little consideration of children's transition from pre-school to elementary education and how the educational system can facilitate that transition. Normally, then, the pre-school environment focuses on social development for young children, who then must make an abrupt transition to a rigid, highly academic environment in elementary school. In the case of Costa Rica, a concrete example provides insights into this problem.

In 2002, the Ministry of Public Education declared worksheets and workbooks that promote *apresto* ('readiness', a term referring in Costa Rica to the instruction of children in visual discrimination and fine motor skills in preparation for later literacy instruction) were not to be used in pre-schools, stating that they limit children's individuality and do not allow children to construct knowledge at their own pace (Ministerio de Educación Pública, 2002). This limitation was supposed to be restricted to the mechanical use of worksheets and rote drills. According to the authors' personal communications with officials in the Ministry of Education and classroom teachers in San José, the limitation of rote learning was interpreted by the Ministry of Public Education's pre-school supervisors to extend to work around emergent literacy skills, whether it involved rote learning or active learning experiences that reflected developmentally appropriate practice.<sup>1</sup> Therefore teachers now informally state that they cannot promote students' emergent writing in the classroom, even such basic skills as allowing children to write their names. They are therefore typically not engaging in any practices designed to develop the emergent literacy skills that will serve as the basis for children's later literacy development.

Ironically, this shift in Costa Rica away from engagement in emergent literacy activities in pre-school classrooms coincided with a greater focus elsewhere in the world on the importance of preventing educational difficulties, as the most cost-effective and efficient way of providing educational opportunities to low-income children. In the USA, for example, there is now a consensus that rich emergent literacy environments in pre-school contribute to the prevention of reading difficulties (Snow *et al.*, 1998), and the International Reading Association (IRA), together with the National Association for the Education of Young Children (NAEYC), in 1998 issued guidelines for developmentally appropriate pre-school emergent literacy instruction.

The limitation of work on emergent literacy in Costa Rican kindergartens represents a lack of articulation with 1st grade, when Costa Rican children are expected to learn to read and write, and are subject to retention if they fail (Rolla San Francisco *et al.*, forthcoming). In 2002 about 15% of 1st-graders repeated in Costa Rica, one of the highest rates of repetition in the educational system (Oficina de Estadísticas, Ministerio de Educación Pública, personal communication, 25.3.2004).

Thus, Costa Rican children are faced with very high stakes around learning to read in 1st grade, and 15% of 1st-graders are held back for not reading and writing

well enough. On the other hand, though most Costa Rican children attend kindergarten, the activities they are exposed to in kindergarten do not provide the developmentally appropriate practice around emergent literacy skills that would lead to higher levels of success in 1st grade.

### **Study rationale**

In summary, while the Costa Rican government has made great strides in increasing access to kindergarten, little is known about (a) the quality of pre-school education in Costa Rica, or (b) kindergartners' mastery of the emergent literacy concepts and skills shown by empirical research to be closely related to initial and later school success—in the USA (Snow *et al.*, 1998), in Chile (Villalón *et al.*, 2003) and in Mexico (Vernon, 2001). Therefore, this paper seeks to provide systematic information about the emergent and early literacy skills achieved in kindergarten and the succeeding grades by Costa Rican children from low-income families, as well as about instructional practice in kindergarten classrooms serving those children.

### **Participants**

#### *Beginning of the school year*

As part of a larger intervention study, 222 kindergarten children from four different elementary schools and nine different classrooms were assessed on a battery of emergent literacy skills at the beginning and the end of the academic year. In addition, for comparative purposes and to examine the instruments' reliability with students of different grade levels, as well as checking their sensitivity to age/grade differences, 31 1st-graders and 20 2nd-graders in one of the participating schools were assessed on the same battery, at the beginning of the academic year, in March 2003. The Costa Rican academic year runs from February through December.

#### *End of the school year*

At the end of the school year, in December 2003, the same 222 kindergarten children were assessed, but we report here only on data from children who received the standard kindergarten curriculum ( $n=56$ ), since the other children participated in pilot interventions that may have increased their scores. The children who received the standard curriculum did not have significantly different incoming levels of emergent literacy skills from children who participated in the different interventions. Therefore, data are reported for 222 kindergarten children at the beginning of the school year and only 56 of those children at the end of the school year.

In addition, 105 children from 1st grade were assessed at the end of the academic year, half of whom had been identified as future repeaters of 1st grade by their teachers and half of whom had not. These children came from 16 classrooms in six public schools. In order for this sample to be more representative of 1st-grade students overall, the 53 non-repeaters were included as a group, along with a

stratified random sample of nine children identified as future repeaters. Thus this sample of 1st-grade students includes 15% who repeated, consistent with the percentage of 1st-grade students who repeated in all of Costa Rica. Children from each school were included in the sample and were chosen in the middle range of scores on reading within each school so as to reduce the influence of outliers. Therefore the sample of 62 1st-grade children will be reported on in the results section and are likely to be representative of those 1st-grade classrooms.

## Methodology

All children were assessed by trained research assistants on a variety of emergent literacy tests normed in or adapted to Spanish: the *Woodcock letter-word identification subtest (decoding)* (Woodcock, 1991); the *Woodcock passage comprehension subtest* (Woodcock, 1991); the *Test de vocabulario sobre dibujos Woodcock (vocabulary)* (Woodcock, 1991); *Clay's concepts about print test* (Escamilla *et al.*, 1996); *Clay's letter identification task* (Escamilla *et al.*, 1996) and the *Spanish phonological test* (Wagner *et al.*, n.d.). The tests were chosen because of their correlations with future literacy skills, which suggests the importance of their development for future literacy (without establishing a causal relationship). Cronbach's alpha was calculated on each of the measures from the group of children in kindergarten, 1st and 2nd grade who participated in the assessments at the beginning of the year ( $n=273$ ), for all tasks except the Woodcock subtests. The alphas ranged between 0.87 and 0.99, indicating that the measures were reliable. The Spanish version of the Woodcock already had norms on a sample of native Spanish-speakers from several Latin American countries and the USA, including Costa Rica.

## Classroom observations

In each of the nine kindergarten classrooms in which interventions were conducted (for a description of the interventions, none of which directly involved classroom teachers, see Rolla San Francisco *et al.*, 2005), one entire class day was observed between August and November of 2003. A video tape was made of each classroom observation and a trained observer was present, taking notes in general on the classroom activities that she observed. In addition, the first author applied the *Classroom assessment scoring scheme (CLASS)* (La Paro *et al.*, 2002) to each observation, which consists of nine seven-point subscales, of which three each are averaged to result in three scale scores that provide a general quantification of the quality of the classroom environment in three areas: emotional support, classroom environment and instructional support. ③

The nine videos were scored by the first author, and two (22%) were scored by an independent rater who had also been trained to use the CLASS and who was a Spanish-English bilingual. The CLASS measures inter-rater reliability as percentage agreement on each scale within one point. The two re-scored videos suggest that raters were sufficiently consistent to permit use of the scores. Although exact

agreement was only 33%, raters agreed within one point out of seven 89% of the time, and the correlation (Spearman's rho) between the two raters was 0.89, indicating acceptable agreement.

## Results

Older children performed better than younger ones on all the skills assessed, as would be expected (see Table 1). Unfortunately, while these results would suggest that these children are growing in their emergent and early literacy skills, they might not be growing enough. At the end of 1st grade, the group tested was still not scoring at ceiling level on the emergent literacy skills: concepts about print, phonological awareness and letter identification. Many of these children were, thus, failing to display a solid foundation for ongoing literacy development.

### *Concepts about print*

Students at the beginning of kindergarten scored on average 2 points on the concepts about print task; students at the end of first and the beginning of second, on average, scoring around 7 points out of a possible 13. At the beginning of the academic year, fewer than 10% of the kindergarteners, 1st-graders and 2nd-graders were able to identify the word 'la', identify a word in a text or indicate a capital letter, indicating that even 2nd-grade students may not have a basic understanding of the functions of print, even though they may be able to decode.

### *Letter identification*

There was little change with age in letter knowledge; the kindergarteners began the academic year with approximately two letters and ended the year identifying five

Table 1. Descriptive statistics, by grade (means and standard deviations in parentheses)

Assessment (with total no. of points in parentheses)	Beginning kindergarten ( <i>n</i> =222)	End kindergarten ( <i>n</i> =56)	Beginning 1st grade ( <i>n</i> =31)	End 1st grade ( <i>n</i> =62)	Beginning 2nd grade ( <i>n</i> =20)
Concepts about print (13)	1.99 (2.42)	4.98 (3.06)	3.58 (3.32)	6.52 (4.03)	7.40 (4.55)
Letter identification (61)	5.49 (10.81)	16.25 (20.68)	23.32 (13.82)	37.66 (17.82)	52.15 (7.34)
Phonological awareness (50)	5.03 (3.96)	7.88 (4.68)	9.81 (7.03)	17.16 (11.39)	22.75 (13.90)
Vocabulary (58)	20.31 (2.90)	21.93 (4.14)	22.29 (4.08)	24.45 (2.49)	24.30 (2.23)
Letter-word identification (58)	5.08 (5.48)	7.16 (6.58)	7.52 (6.50)	25.74 (17.75)	41.25 (14.16)
Reading comprehension (43)		0.84 (4.69)		5.29 (6.56)	

letters. At the end of 1st grade, students were on average able to identify only 38 letters of the 61 presented on the test. There was a strong correlation between scores on letter identification and decoding ( $r=0.81$ ,  $p=0.000$ ), suggesting that children who could identify more letters at the end of the year were reading better.

### *Phonological awareness*

Averages on phonological awareness increased between kindergarten and 2nd grade from 5 to 23, but even the 2nd-graders scored on average well below the test ceiling of 50. This is somewhat surprising, given that the 20 2nd-graders assessed were on average reading above grade level. Perhaps the fact that children scoring in the expected range on word reading scored so low on phonological awareness indicates that phonological awareness is not as important for learning to read in Spanish as in English (Villalón *et al.*, 2003), or that phonological awareness is not being developed enough in the classroom. On the other hand, there was a moderate correlation between phonological awareness and decoding ( $r=0.63$ ,  $p=0.000$ ).

### *Vocabulary*

Again, there appeared to be growth in vocabulary over time. On average, students' scores ranged from 20 to 24 between the beginning of kindergarten and 2nd grade, approximately on grade level according to the Woodcock norms.

### *Letter-word identification*

On average, children were able to answer five questions from the *Letter-word identification* subtest correctly at the beginning of the kindergarten year; this score reflects the ability to associate a picture with a rebus (symbol) for the picture and the identification of one letter. It is not until item 12 on the subtest that children actually have to decode words. The children at the beginning and end of kindergarten, as well as the beginning of 1st grade, scored well below grade-level norms. At the end of 1st grade, students were scoring slightly above grade level (the grade equivalent of nine months into the 1st-grade year), and the 2nd-grade children on average scored well above grade-level norms (one month into 5th grade). It should be noted, however, that these are averages: 52% of 1st-graders were below grade level at the end of 1st grade and 25% of 2nd-graders at the beginning of second grade. It is important to recall that most students who are not reading well at the end of 1st grade are not promoted to 2nd grade.

### *Reading comprehension*

At the end of 1st grade, students were scoring on average 5 points on comprehension, the equivalent of three months into the 1st-grade year. These students were already eight months into first grade. Therefore it would be interesting

to see how reading comprehension continues to develop over time—i.e. if Costa Rican students are falling behind in Latin American norms.

It is important to note that the above cross-sectional data can only suggest growth that occurs between kindergarten and 2nd grade. A longitudinal study would be required to confirm growth patterns. However, it is clear that the average low-income Costa Rican child has not developed strong emergent literacy skills by the end of kindergarten (or even, in some cases, by 1st or 2nd grade), which raises the question of what kind of instruction children are receiving in kindergarten classrooms.

### **Classroom observations**

Having seen the very low levels of emergent literacy knowledge at the end of kindergarten, it is important to understand what kinds of instruction children are exposed to in kindergarten. Given that the Ministry of Public Education had cautioned against teaching *apresto* ('readiness') in kindergarten, which had been interpreted by many as meaning that emergent literacy skills should not be taught in the kindergarten classroom, it is interesting to explore both what the official kindergarten curriculum consists of and what actual instruction is going on in kindergarten classrooms.

### **The kindergarten curriculum**

The content of the Ministry of Public Education's curriculum is divided into year-long thematic units, in which the child explores himself as a person; his body; communication with others; different kinds of languages; the natural, physical and social environment; and mathematical games. The curriculum specifically mentions working on the following skills within the unit on language and emergent literacy skills: concepts about print, phonological awareness, vocabulary, writing, decoding, oral or reading comprehension, and letter knowledge. The content of the Ministry curriculum relevant to language and emergent literacy skills is presented in Figure 1.

The prescribed schedule for kindergarten in Costa Rica, which lasts 4 hours and 10 minutes per day, includes: 15 minutes of initial activities; 30 minutes of

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <b>Phonemes, syllables, words, phrases, sentences</b></li> <li>• <b>Initial and final sounds, and blending</b></li> <li>• <b>Auditory memory—discriminating sounds in the environment</b></li> <li>• <b>Rhythm and songs</b></li> <li>• <b>Children's literature</b></li> <li>• <b>Expression with drawings, signs, etc.</b></li> <li>• <b>Interpreting different types of text</b></li> <li>• <b>Identifying significant words</b></li> <li>• <b>Vocabulary</b></li> <li>• <b>Comparing and contrasting drawings, letters, words</b></li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Figure 1. Language and literacy skills included in the Ministry of Public Education's curriculum

conversation (in which curricular content is supposed to be covered); 1 hour 10 minutes for recess, oral hygiene, a snack and rest; 1 hour spent in *Juego-trabajo* (Work-play); and 40 minutes for individual attention, in which small groups of children are asked to stay with the teacher after school to work on specific skills in which they need special support. Figure 2 displays the distribution of time in the Ministry of Education's schedule for kindergarten.

We observed nine kindergarten classrooms in six schools from two different school districts in order to provide a description of what the teachers were doing during class time. The following is a description of the activities observed during the kindergarten schedule.

15 min	Initial activities
30 min	Conversation
60 min	<i>Juego-trabajo</i> (Play-work)
30 min	Recess
40 min	Oral hygiene, a snack and rest
30 min	Music or literature
5 min	Closing activities
40 min	Individual attention

Figure 2. Ministry of Public Education's schedule for kindergarten classrooms

Period	Description
Initial activities	<p>The teacher receives the children in her group. Usually the teacher gathers the children in the one area in the classroom in which whole-group activities are conducted. All of the children sit on the floor with the teacher standing or sitting in front of them</p> <p>The morning greeting usually consists of:</p> <ul style="list-style-type: none"> <li>• an opening prayer</li> <li>• an opening song</li> <li>• attendance (usually with an individual marker for each child which is placed in a container that indicates the child is present, and usually accompanied with a song that is repeated for each child; the marker normally has the child's photograph and/or name written on it)</li> <li>• the date: the teacher normally writes the date on the board and occasionally discusses what day was yesterday, tomorrow, etc.</li> <li>• the weather: the class discusses the weather, usually with some sort of visual representation</li> <li>• songs: some teachers sing popular songs that involve body movement</li> </ul>
Conversation	<p>The objective of this period is normally oral language. During this period, which is usually teacher-directed with the occasional individual participation of different pupils, the teacher discusses curricular content with the children; e.g. the teacher may describe different shapes and their names and ask individual children to identify shapes around the room</p>

Figure 3. A typical observed day in a Costa Rican public kindergarten

Period	Description
<i>Juego-trabajo</i>	Typically children are assigned to or choose a centre to work in for the entire period. A minority of teachers ask a few students each day to plan which centre they are going to go to and then describe what they did at those centres at the end of the period. The most common centres are: art, drama, construction, library, science and mathematics. The centres have the same materials throughout the year and no specific objectives are worked on in the centres; the centres are intended for the methodology <i>Juego-trabajo</i> (Play-work). Occasionally children will be given a teacher-directed activity which is related to curricular content that they can work on individually at tables. The teacher rarely interacts with children around the activities they are doing, but normally does administrative work or cleans the room. At the end of the period, children clean up
Recess	The children play outside while the teacher observes them
Oral hygiene, a snack and rest	The children wash their hands and eat their snack. Depending on the school, some children bring their snack from home and others receive food provided by the government in a special dining-room. The children then brush their teeth and lie down on towels or cushions and rest. While they rest, some teachers leave the children by themselves in the classroom, while others observe them in silence or play a music cassette for the children to listen to
Music or literature	The period of music or literature alternates daily. During music, the children sit as a whole group with the teacher and sing children's songs. During literature, the teacher reads or tells a story to the whole group
Closing activities	The children gather their things and go home
Individual attention	Each day a small group of children, around five, is supposed to stay with the teacher for this period. The time is usually used to administer assessments at the beginning and end of the year; to organise individual meetings with parents; or to provide activities for weak areas that the teacher has found in specific children In general, fine and gross motor skills are worked on. In the majority of the classrooms observed (5/9), individual attention was not given

Figure 3. (Continued)

The observations from these classrooms indicate that the primary activities centre on social development and open-ended play. When curricular content is covered, it is normally covered in a teacher-centred, whole-group format. The lack of interactive conversation in the pre-school classroom has been noted by others (Chacón & Murillo, 1995). Little systematic work is conducted on oral language and emergent literacy skills. Children do not have access to developmentally appropriate materials during the day that are appropriate for emergent readers and writers.

When teachers do read stories to children, they are typically from books with few illustrations. The teachers normally read stories with few opportunities for children to interact around the story or to discuss the concepts behind vocabulary words. In some cases, comprehension questions are discussed in terms of the literal information provided in the story and the sequence of major events; rarely, however,

is the story related to the children’s lives or as a source of broader discussion. The official methodology of *Fuego-trabajo* has been implemented in these classrooms as open-ended play in centres in the classroom, with loose monitoring by the teacher.

To supplement this description of classroom activities, we applied the CLASS observation scheme to reflect the overall classroom functioning, both as a supportive emotional and developmentally appropriate environment for children. The CLASS observation scheme provides information on the emotional support in the classroom, the effectiveness of classroom management and instructional support. Each of the scales provides a score from 1 to 7, with a score of 1–2 considered low, 3–5 medium and 6–7 high.

*Emotional support (positive climate, negative climate, sensitivity)*

Here the results are presented in Table 2 and in Figure 4, together with an average and the ranges for the nine teachers. The teachers scored in the medium range for emotional support. In general, on emotional support, the teachers exhibited few

Table 2. Results of teacher observations from nine classrooms

	Average	Range	Maximum
Emotional support	5.4	4.4–6.0	7.0
Classroom management	4.9	3.7–5.7	7.0
Instructional support	2.5	2.0–3.0	7.0

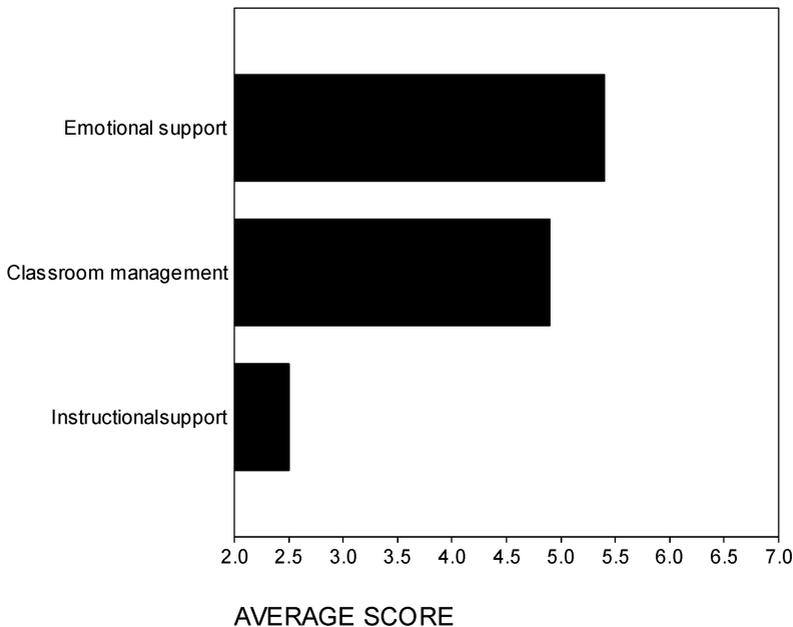


Figure 4. Graph of average results of classroom observations

negative attitudes towards the children, although they varied in how positive an atmosphere was observed in the classroom. Their sensitivity towards their children was normally low to medium, as measured by their responsiveness to their students.

*Classroom management (over-control, behaviour management and productivity)*

Most teachers attained low scores on productivity during the observation: for example, this means providing one activity for a 45-minute period without planning any additional activities for the majority of the class that had finished after 15 minutes and simply having students wait in line to go out for recess once they finished. Teachers were fairly uniform in a lack of rigidity in their classroom management, reflected in the over-control score, especially during *Juego-trabajo*, when students chose which centres they would go to. The low to medium scores on classroom management reflected variation in behaviour management. Some teachers were more successful than others in managing students' behaviour and misbehaviour.

*Instructional support (concept development, instructional learning formats, quality of feedback)*

The teachers were low on instructional support. Virtually no higher-order concepts were discussed during the observations, as reflected by low scores on concept development, with some variation around the variety of instructional learning formats used to teach children. There was virtually no quality feedback provided to children to help them think critically as they learned; for the most part, there were few challenging questions and most feedback consisted in correct answers provided by the teacher. These low scores on instructional support make sense, since the activities in these kindergarten classrooms focused on social development and acclimatisation rather than cognitive and language development.

## **Discussion**

These results suggest that in Costa Rica, low-income children typically enter and finish kindergarten with few emergent literacy skills. These results are in sharp contrast with the USA. A nationally representative sample of US kindergarteners had much greater levels of emergent literacy skills overall at the beginning and end of the year. For example, as a comparison, 66% of American kindergarteners recognised all of the letters at the beginning of the year and 94% recognised all of the letters at the end of the academic year (West *et al.*, 2000). In this small Costa Rican sample of low-income children, 0.5% (1 child) recognised all of the letters of the alphabet at the beginning of the academic year and 1.8% (1 child) recognised all of the letters of the alphabet at the end of kindergarten.

A comparison with another developing Latin American country may be considered fairer and shows that the results are fairly similar across countries. A study of low-income 1st-grade children in Chile found that they identified 12 letters on average out of a possible 27, or 44% correct; 3.5% (14 children) of the Chilean

sample recognised all of the letters at the beginning of the school year (Bravo *et al.*, 2001). The Costa Rican 1st-graders identified on average 23 letters out of a possible 58 (including upper- and lower-case letters) at the beginning of the year, or 40% correct; 0% identified all of the letters. This low level of achievement of Latin American countries has been replicated in international comparisons in literacy achievement (Mullis *et al.*, 2003).

The other main finding of this study is that these Costa Rican kindergarten children were in moderately positive classroom environments in which, for the most part, classroom management was not a major issue. On the other hand, these children received little preparation for the literacy challenges of 1st grade, when their teachers expect them to learn to read and write within one academic year. The finding that classrooms are socially supportive but cognitively passive is very similar to that found in a large-sample classroom observations in pre-school through kindergarten in the USA; the difference with the US findings is that there was much greater variability in the activities conducted in the classrooms, which may reflect the small sample size in Costa Rica, or may reflect cultural differences (Pianta & La Paro, 2003).

The observed kindergarten teachers were not working on the emergent literacy skills that are developmentally appropriate for kindergarteners and are a necessary base for literacy development in 1st grade (NAEYC & IRA, 1998; Snow *et al.*, 1998). Ironically, the 1st-grade teachers who follow those same kindergarten teachers focus primarily on reading and writing skills as their main criterion in their decisions to retain children (Rolla San Francisco *et al.*, forthcoming). Therefore it appears that low-income Costa Rican children have to transition abruptly from an environment of socialisation in kindergarten to an academic environment in 1st grade that expects them to meet certain standards within a relatively short amount of time.

Professional development for kindergarten teachers is a possible route to providing children with the base they need to succeed in 1st grade. A pilot programme is currently being developed in Costa Rica by the authors to provide a framework for supporting the Ministry of Education curriculum and the enrichment of oral language and emergent literacy activities in the classroom and to prepare kindergarten children for success in 1st grade.

## Conclusion

This paper describes cross-sectional data from low-income Costa Rican children in kindergarten through 2nd grade, with an emphasis on their emergent literacy skills. The results indicate low initial levels of student emergent literacy skills upon entry into kindergarten and suggest a lack of growth in these skills during the kindergarten year. Thus, children do not acquire the skills that would prepare them optimally for the task of learning to read and write in 1st grade. The observations of nine kindergarten classrooms indicate a very low level of attention to emergent literacy skills. We argue that enriched literacy practices in kindergarten and better articulation with 1st grade is needed.

## Notes

The authors of this paper work for a non-profit organization in Costa Rica called Amigos del Aprendizaje (Friends of Learning) which provides interventions in emergent literacy skills to kindergarten children in public schools in San José.

1. The authors wish to acknowledge explicitly that this was not the initial intent of the Ministry of Education, which was to limit developmentally inappropriate practice around emergent literacy skills.

## References

- Boocock, S. S. (1995) Early childhood programs in other nations: goals and outcomes, *Future of Children*, 5(3), 94–114.
- Bowman, B., Donovan, M. & Burns, S. (Eds) (2000) *Eager to learn: educating our preschoolers* (WashingtonDC, National Academy Press).
- Bravo, L., Villalón, M. & Orellana, E. (2001) Procesos predictivos del aprendizaje inicial de la lectura en primero básico, *Boletín de Investigación Educativa*, 16, 149–160.
- Chacón, S. & Murillo, M. (1995) Las funciones del lenguaje en el aula de preescolar, paper presented at the II Simposio de Educación Preescolar, University of Costa Rica (San José). 4
- Chaves, L. (2001) *La educación preescolar en el contexto nacional 1970–1998*. Investigativas en Educación, Facultad de educación, Instituto de Investigación para el Mejoramiento de la Educación Costarricense, Universidad de Costa Rica, 1, 2.
- Epstein, A. S. (2003) How planning and reflecting develop young children's thinking skills, *Young Children*, 58(5), 28–36.
- Escamilla, K., Andrade, A. M., Basurto, A. G. & Ruiz, O. A. (1996) *Spanish reconstruction of an observation survey, a bilingual text: instrumento de observación de los logros de lecto-escritura inicial* (Portsmouth, NH, Heinemann).
- La Paro, K. M., Pianta, R. C. & Cox, M. (2000) Kindergarten teachers' reported use of kindergarten to first grade transition practices, *Elementary School Journal*, 101(1), 63–78.
- La Paro, K. M., Pianta, R. C., Stuhlman, M. & Hamre, B. (2003) *Classroom assessment scoring system (CLASS)* (Charlottesville, VA, University of Virginia).
- Ministerio de Educación Pública (1999) *Programa de estudios, ciclo de transición, educación preescolar* (San José, Costa Rica, Ministerio de Educación Pública). 5
- Ministerio de Educación Pública (2002) *Educación preescolar en Costa Rica: consideraciones y lineamientos para el desarrollo de la práctica pedagógica en el nivel preescolar (Programa de Mejoramiento de la Calidad de la Educación Preescolar y General Básica, Departamento de Educación Preescolar* (San José, Costa Rica, Ministerio de Educación Pública).
- Ministerio de Educación Pública (2003) *Diagnóstico preliminar de la educación costarricense (Relanzamiento de la educación, foro nacional de la educación para todos)* (San José, Costa Rica, Ministerio de Educación Pública), 26 November.
- Mullis, I. V.S., Martin, M. O., Gonzalez, E. J. & Kennedy, A. M. (2003) *PIRLS 2001 international report: IEA's study of reading literacy achievement in primary schools in 35 countries* (Chestnut Hill, MA, International Study Center, Lynch School of Education, Boston College).
- National Association for the Education of Young Children (2003) *NAEYC accreditation*. Available online at: [http://www.naeyc.org/accreditation/naeyc\\_accred/info\\_general-components.asp](http://www.naeyc.org/accreditation/naeyc_accred/info_general-components.asp) (accessed 2 December 2003).
- National Association for the Education of Young Children and International Reading Association (1998) *Learning to read and write: developmentally appropriate practices for young children*. Available online at: [http://www.naeyc.org/resources/position\\_statements/psread98.pdf](http://www.naeyc.org/resources/position_statements/psread98.pdf) (accessed 24 May 2004).
- NICHD Early Child Care Research Network (2002) Child-care structure →process→outcome: direct and indirect effects of child-care quality on young children's development, *Psychological Science*, 13(3), 199–206.

- Pianta, R. C. & La Paro, K. (2003) Improving early school success, *Educational Leadership*, 60(7), 24–29.
- Rolla San Francisco, A., Arias, M., Villers, R., Badilla, E. & Snow, C. (2005) Evaluating the impact of different early literacy interventions on low-income Costa Rican kindergarteners' academic skills, paper presented at the Conference on Education Research in Developing and Transition Countries, Prague, Czech Republic. [6]
- Rolla San Francisco, A. R., Arias, M. & Villers, R. (forthcoming) Costa Rican teachers' decisions to retain first grade children: the importance of reading skills, pre-reading skills, and family.
- Schweinhart, L. J. (2003) Benefits, costs, and explanation of the High/Scope Perry Preschool Program, paper presented at the Meeting of the Society for Research in Child Development, Tampa, FL. [7]
- Snow, C. E., Burns, M. S. & Griffin, P. (1998) *Preventing reading difficulties in young children* (Washington, DC, National Academy Press).
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., Taggart, B. & Elliot, K. (2003) *The effective provision of Pre-school Education (EPPE) Project: findings from the pre-school period*. Available online at: [http://www.ioe.ac.uk/cdl/eppe/pdfs/eppe\\_brief2503.pdf](http://www.ioe.ac.uk/cdl/eppe/pdfs/eppe_brief2503.pdf) (accessed 29 November 2003).
- Ugalde, M. (1995) La articulacion de la educacion preescolar y la educacion primaria, paper presented at the II Simposio de Educación Preescolar, University of Costa Rica (San José). [8]
- Vernon, S. (2001) La identificación de letras, la conciencia fonológica y el desarrollo de la escritura en niños preescolares [Letter identification, phonological awareness and writing development in preschool children], paper presented at the II Simposio Internacional de Lectura y Vida, Buenos Aires. [9]
- Villalón, M. B., Orellana, E. & Rolla San Francisco, A. (2003) The predictive value of phonological awareness skills in reading acquisition: a longitudinal study of Spanish-speaking children, paper presented at the American Educational Research Association Annual Conference, Chicago. [10]
- Wagner, R. K., Torgesen, J. K. & Rashotte, C. (n.d.) *Spanish phonological test* (Austin, TX, Pro-Ed).
- West, J., Denton, K. & Reaney, L. M. (2000) *The kindergarten year: findings from the Early Childhood Longitudinal Study, kindergarten class of 1998–99* (Washington, DC, National Center for Educational Statistics).
- Woodcock, R. W. (1991) *Woodcock language proficiency battery—Revised* (Itasca, IL, Riverside).
- Yeboah, D. A. (2002) Enhancing transition from early childhood phase to primary education: evidence from the research literature, *Early Years*, 22(1), 51–68.

## Authors Queries

Journal: **Early Years**

Paper: **112778**

Title: **Quality early childhood education in Costa Rica? Policy, practice, outcomes and challenges**

Dear Author

During the preparation of your manuscript for publication, the questions listed below have arisen. Please attend to these matters and return this form with your proof. Many thanks for your assistance

Query Reference	Query	Remarks
1	Keywords – please supply up to six 'keywords' for abstracting purposes.	
2	NICHD Early Child Care Research Network (2002), as References?	
3	La Paro et al. (2003), as References?	
4	Chacón & Murillo (1995) – date (month) for Symposium?	
5	Ministerio de Educación Pública (1999) – not noticed cited in text.	
6	Rolla San Francisco et al. (2005) – date for Conference?	
7	Schweinhart (2003) – date for Meeting?	
8	Ugalde (1995) – date for Symposium?	
9	Vernon (2001) – date for Symposium?	
10	Villalón et al. (2003) – Please check.	