NEKTARIOS STELLAKIS and MARIANNA KONDYLI

THE EMERGENCE OF WRITING: CHILDREN'S WRITING DURING THE PRE-ALPHABETIC SPELLING PHASE

ABSTRACT. Learning to read and write constitutes a central part of becoming literate. From an emergent literacy perspective, learning to write starts during the first years of a child's life, fostered by experiences that permit and promote meaningful interaction with oral and written language. Data from a research study that took place in 11 pre-primary education classes in the region of Achaia, Greece, is reported. The early children's attempts to write are in the center of this paper. Written samples by 172 pupils (aged 47–71 months), who were in the pre-alphabetic spelling phase, the period preceding the phonographic or conventional spelling, are analyzed. During this phase, even though the children have not yet discovered the letter sound correspondence, they demonstrate a great amount of knowledge of what is written language, how it works and what are its purposes. The results of the study suggest that reading and writing development is a strictly interrelated process and pre-school education reinforces literacy by creating context of decontextualized language use. The educational implications of the findings are also discussed. The main argument is that kindergarten education could significantly help the development of early literacy, but it is important to adopt an approach that starts from what children know and gives them opportunities to communicate by writing.

KEY WORDS: emergent writing and reading, kindergarten education, pre-alphabetic phase of writing

1. Introduction

A considerable body of research in the last three decades reveals that when children receive appropriate opportunities and encouragement, they attempt to write long before formal schooling begins (Baghban, 1984; Bissex, 1980; Dyson, 1985; Harste, Woodward & Burke, 1984; Smith & Elley, 1998; Sulzby, 1985; Whitehurst & Lonigan, 2001). From an *emergent literacy* perspective, literacy acquisition is seen as a lifelong journey beginning very early in a child's life. Learning to read and write involves mastering a diverse range of skills and understandings about the nature and the rules of written language (Papoulia–Tzelepi, 2001). Sulzby and Teale (1996: 728) state that

emergent literacy is concerned with the earliest phases of literacy development, the period between birth and the time when children read and write conventionally. The term emergent

L1 – Educational Studies in Language and Literature **4:** 129–150, 2004.
© 2004 *Kluwer Academic Publishers. Printed in the Netherlands.*

literacy signals a belief that, in a literate society, young children – even 1 and 2 years old – are in the process of becoming literate.

One basic assumption of emergent literacy theory is that literacy develops from real situations in which reading and writing are embedded. The literacy experienced by children in their homes is functional, meaningful, authentic, and embedded in everyday activities (e.g., Hiebert, 1986; Morrow, 1994; Topping & Wolfendale, 1995). Through active engagement, exploration, and experimentation, children begin forming concepts about the nature and patterns of written language. Hence, research on emergent literacy emphasizes the role of the adult (parent, teacher) in fostering the child's literacy development rather than helping the child get the "right" answer (Clay, 1991; Vygotsky, 1978).

Reading readiness approaches (e.g., Miller, 2000) characterized former Greek curriculum (in use from 1984 to 1998) (Papoulia-Tzelepi, 2001). Literacy activities were prohibited in kindergarten with the only exception being fairytale reading by the teacher and writing first names. The influence of recent research on emergent literacy theories is evident in a new curriculum introduced in 1999 (Ministerial Decree C1/58, 1999). It supports literacy workshops and whole language practices and the integration of written language in all kinds of activities.

In this paper we focus on written samples of children who have not yet discovered the alphabetic principle: that is, that every letter represents a specific speech sound (Gough & Wren, 1999; Temple, Nathan, Temple & Burris, 1993). Due to lack of much phonemic awareness and alphabetic knowledge, these children are unable to use more advanced means of forming alphabetic connections to write or read words (Ehri, 1999). On the other hand, through their written products children demonstrate a remarkable amount of knowledge about the symbolic nature of writing as well as the graphic aspects of writing. The *pre-alphabetic spelling phase* could be considered an initial point for children beginning to "unravel the mysteries" of written language. Hence, the importance of this phase should not be underestimated. Relative terms like "pre-instrumental" (Luria, 1983), "deviant" or "pre-communicative" (Gentry, 1982), do not appropriately describe this phase, mainly because children themselves insist that their own writing contains a message and may read what they have written when asked to do so, or ask adults to read it. Moreover, such negative connotations stress what children do *not* know and ignore the potential contribution of this knowledge to the development of literacy.

This research aims to study the knowledge kindergarteners at pre-alphabetic phase demonstrate about written language within the context of written

production and stresses the role of authentic literacy practices to facilitate emergent literacy practices. More specifically, our main purpose is to:

- compare literate performances (*writing* and *reading*) across two different text types (namely list and message),
- examine to which extent the attendance of a pre-school year affects literate performances.

2. Method

2.1. *Setting*

The study was conducted in eight public and three private pre-primary classes in different socio-economic areas of Patras (Greece). The literacy program looked similar in all the classrooms. Children had access to books but no writing materials were available in learning centers. Previously, teachers had not required pupils to write anything apart from copying their first names from the board. Even though a lot of print was displayed in the classroom (e.g., names, calendars, magazines, signboards), teachers did not use them to explicitly foster literacy. In general, contrary to the pre-suppositions of the official curriculum, teachers, due to limited training and knowledge about the emergent literacy theory, avoided literacy practices in the daily school activities and adopted a teacher-centered, skill-oriented and product-focused model, based on the traditional assumptions that literacy means teaching conventional reading/writing skills (cf. Tafa, 2002; Voineskou, 2001). Especially at the beginning of the school year, teachers assumed that literacy activities other than reading fairytales and copying their names had no place in the daily routine.

2.2. *Subjects*

In Greece, kindergarten education is voluntary. Officially divided into two age groups (Year 1: 4–5-year-olds, and Year 2: 5–6-year-olds), both age groups are taught in the same classroom. Since kindergarten attendance is voluntary, some parents register their children in kindergarten just a year before compulsory education begins, while other parents register two years before. For this reason the subjects (172), all native speakers of Greek, were divided into the following three groups according to the age and the years of kindergarten attendance:

Group 1: 62 children (36 boys and 26 girls) of year 1, ranged in age from 47 (3;11, i.e., 3 years and 11 months) to 61 months (5;11), with a mean age of 53 months (4;5).

Group 2.1: 65 children (41 boys and 24 girls) of year 2, registered for first time in kindergarten, ranged in age from 57 (4;9) to 71 months (5;11), with a mean age of 64 months (5;4).
Group 2.2: 45 children (20 boys and 25 girls) of year 2, registered for second time in kindergarten, ranged in age from 59 (4;11) to 71 months (5;11), with a mean age of 65 months (5;5).
The study began with 204 subjects, though eventually 32 were excluded from the analysis for various reasons: 8 because they were not native speakers of Greek or Grade 1 pupils, who, for various reasons, remained in kindergarten. The remaining pupils (5 from Group 1, 1 from Group 2.1 and 18 from Group 2.2) were excluded because they had acquired an understanding of alphabetic rules (invented spelling, initial or some letters of a word, phonetic spelling or transitional orthography). Informal observations by the researchers and teachers indicated that the children remaining in the study were at least of average performance in oral language development.

2.3. *Data Collection*

To minimize the influence of school attendance the data was collected at the beginning of the academic year (first fortnight of November 2000). Working in literacy workshops (Rog, 2001), the researchers engaged the children in meaningful communicative practices (Kondyli, 2000) that could lead to writing and reading a text. We designed authentic literacy activities (Giannikopoulou, 2002; Rog, 2001; Stewart, 1992) since this calls on their store of knowledge about writing. To that end, we introduced a problem through a relevant story for the children to discuss, find the best solution, and compose a specific text type.

Two types of texts were chosen: a list and a message. These texts probably represent the most frequently observed texts by children of that age in both their family and their wider social environment (Chapman, 1994; Zecker, 1999). Moreover, these texts differ in structure and function since they express different communicative purposes (Dyson, 1985). Under these conditions, depending on the content, the communicative purpose and the expectations of the possible audience, the children were expected to arrange the words in the space of the page. Other studies (Chapman, 1994; Newkirk, 1989; Zecker, 1996, 1999) indicate that children, from early on in their literacy development, know a considerable amount about the communicative functions and formats of a variety of texts.

The observations took place in two sessions, a week apart. During the first session, the researchers read a letter from the mayor of the city who wished to buy new toys for children their age that their parents could not afford. He did not know their preferences. The mayor asked if the children

could help him in making the selections. During the second session, the children heard a story about a castaway whose ship was wrecked though he managed to reach a remote island. The children participated in role play and, among other things, decided to write messages asking for help.

At the end of each session the children were asked to read their writing to the class. It should be noted that children were not expected to read conventionally, and for this reason, were encouraged to "pretend" to read.

The role of the researchers and the teacher was limited. We replied to questions such as, "Do I have to start from here?" or "Is this a letter?" Even then, we acted cautiously. For example, we would say, "Where do you think we should start writing?" and, "Where could you check your writing? Perhaps the board with the cards of your names is a good place."

2.4. *Coding of Children's Literacy Performance*

Children's writing was classified using a modified version of several category systems: Sulzby, Barnhart and Hieshima's (1989) "Categories of Writing Systems" (Ferreiro & Teberosky, 1982; Gorman & Brooks, 1996; Temple et al., 1993). We used six categories ranging from the simpler or more primitive emergent writing systems to closer to conventional writing: (1) Story-related drawings, (2) Scribbling, (3) Letter-like forms, (4) Letter strings I, and (6) Letter strings II (see Appendix for detailed description). All written texts were also coded for linearity, directionality, page arrangement, and awareness of specific characteristics of text genre. The last variable is referred to as the spatial organization of the two text types. Texts such as "lists" consisting of a series of items written in a column format, and "messages" that contained a salutation, a message and a closing that includes author's name were judged positively.

Reading performance was classified according to a simplified version of "Forms of Rereading categorization" devised by Sulzby et al. (1989) in the following categories: (1) Refusal, (2) Labeling or Narration, (3) Oral monologue, (4) Reading like monologue (See Appendix). Judgments were made independently by two researchers and the interrater agreement was 96%.

2.5. *Statistical Analysis*

2.5.1 *Writing and Reading Performance*

One main assumption of emergent literacy theory is that reading and writing are interwoven, inseparable processes amd learned simultaneously by reinforcing and supporting each other in the literacy learning process (Glazer & Burke, 1994; Hall, 1999; Miller, 2000; Teale & Sulzby, 1986). Hence, our research design counts writing and reading as interdependent variables, since participants had to "read" the text they had written just before the

reading. For these reasons, writing and reading performances will be examined together.

The Kolmogorov–Smirnov's Test of normality revealed that our data do not follow the normal distribution at any level of significance and because our variables are ordinal, we applied non-parametric tests. First, we looked for differential effects on literacy performances between the two text types. The Wilcoxon Test showed statistically significant difference for both writing ($Z = -5.826$, $P = .000$) and reading performance ($Z = -6.416$, $P = .000$) in the total number of subjects. This indicates that writing and reading performance differ between the two texts and for that reason, will be analyzed separately. In general, the "list" seems easier than the "message" text for young children to copy. Moreover, the Spearman Correlation Coefficient Test showed statistically significant correlation between writing and reading performance and *vice versa* in both text types and in all three groups (Table 1). In other words, those children whose writing had been classified as more mature also demonstrated more mature reading performance.

These findings empirically support the assumption that learning to read and write are strongly interrelated processes involving similar types of knowledge (Tierney & Shanahan, 1991) and cognitive processes (Langer, 1986) and thus, should be taught together (Cooper, 2000).

Tables 2 and 3 preset the cross-tabulations of writing and reading performances split into the three groups. The rows represent the writing performance; the columns, the reading.

In the list text (Table 2) a very small percentage (6.5%) of Group 1 drew pictures. Half (3.2%) refused to "read" and the other half (3.2%) labeled the items they had drawn. Almost one-fourth, or 22.6% of this group generated "scribbles." 3.2% refused to write, 1.6% did not read the scribbles but labeled the drawings, 11.3% employed oral monologue and 6.5% had reading-like monologues. The dominant category of writing was letter-like

TABLE 1
Spearman Correlation Coefficient Test.

Group	*N*	List	Message
Group 1	62	$r = 0.337^{**}$	$r = 0.389^{**}$
		$P = 0.007$	$P = 0.002$
Group 2.1	45	$r = 0.606^{**}$	$r = 0.541^{**}$
		$P = 0.000$	$P = 0.000$
Group 2.2	65	$r = 0.360^{*}$	$r = 0.366^{*}$
		$P = 0.015$	$P = 0.013$

**Correlation is significant at the 0.01 level and *Correlation is significant at the 0.05 level.

TABLE 2
Classification of writing and reading performance of text type: "List."

	Refusal	Labeling/ Narration	Oral monologue	Reading-like monologue	Total
Group 1 (N = 62)					
1. Story-related drawings	3.2	3.2			6.5
2. Scribbling	3.2	1.6	11.3	6.5	22.6
3. Letter-like forms	1.6	6.5	29	4.8	41.9
4. Letter strings 1	3.2	1.6	6.5	6.5	17.7
5. Letter strings 2			3.2	8.1	11.3
Total	11.2	12.9	50	25.9	100
Group 2.1 (N = 65)					
1. Story-related drawings	1.5	6.2			7.7
2. Scribbling	4.6	4.6	3.1	1.5	13.8
3. Letter-like forms	1.5	10.8	6.2	7.7	26.2
4. Letter strings 1		4.6	13.8	7.7	26.2
5. Letter strings 2		1.5	4.6	20	26.2
Total	7.7	27.7	27.7	36.9	100
Group 2.2 (N = 45)					
1. Story-related drawings		2.2			2.2
2. Scribbling			2.2		2.2
3. Letter-like forms	4.4	2.2	11.1	8.9	26.7
4. Letter strings 1	2.2	2.2	13.3	17.8	35.6
5. Letter strings 2		4.4	4.4	24.4	33.3
Total	6.7	11.1	31.1	51.1	100

strings (41.9%). Of those, 1.6% refused to read, 6.5% labeled the drawings, 29% employed oral monologue, and 4.8% had reading-like monologues. 17.7% of the written samples of Group 1 was categorized in the letter strings I category, which means that in these samples, the *principle of internal qualitative variations* had been taken into account. 3.2% of them refused to read, 1.6% labeled the drawings, 6.5% employed oral monologues and another 6.5% reading-like monologues. Finally, 11.3% of the written samples was categorized in the letter strings II category. In these samples both the *principle of internal qualitative variations* and the *principle of minimum quantity* had been taken into account. 3.2% employed oral monologues and 8.1% reading-like monologues.

In Group 2.1, 7.7% were content just to draw. Of those, 1.5% refused to "read" and the rest (6.2%) labeled the items they had drawn. Scribbling

TABLE 3
Classification of writing and reading performance of text type: "Message."

	Refusal	Labeling/ Narration	Oral monologue	Reading-like monologue	Total
Group 1 (N = 62)					
1. Story-related drawings	6.5	21			27.4
2. Scribbling	3.2	6.5	6.5	1.6	17.7
3. Letter-like forms	6.5	8.1	12.9	3.2	30.6
4. Letter strings 1	6.5		9.7	3.2	19.4
5. Letter strings 2			1.6	3.2	4.8
Total	22.6	35.5	30.6	11.3	100
Group 2.1 (N = 65)					
1. Story-related drawings	4.6	18.5			23.1
2. Scribbling	4.6	3.1	3.1		10.8
3. Letter-like forms	7.7	10.8	4.6		23.1
4. Letter strings 1	1.5	7.7	15.4	12.3	36.9
5. Letter strings 2	1.5		3.1	1.5	6.2
Total	19.9	40.1	26.2	13.8	100
Group 2.2 (N = 45)					
1. Story-related drawings	4.4	2.2			6.7
2. Scribbling	2.2				2.2
3. Letter-like forms			15.6	6.7	22.2
4. Letter strings 1	4.4	15.6	22.2	8.9	51.1
5. Letter strings 2			4.4	13.3	17.8
Total	11.1	17.8	42.2	28.9	100

occurred for 13.8% of the students, of which 4.6% refused to write, 4.6% labeled the drawings, 3.1% employed oral monologue, and 1.5% reading-like monologue. 26.2% wrote letter-like forms, and 1.5% of those refused to read, 10.8% labeled the drawings, 6.2% employed oral monologue and 7.7% reading-like monologue. 26.2% of the written samples of Group 2.1 was categorized in the letter strings I category, of which 4.6% labeled the drawings, 13.8% employed oral monologue, and 7.7% reading-like monologue. Finally, 26.2% of the written samples were categorized in the letter strings II category. 1.5% labeled the drawings, 4.6% employed oral monologue and 20% had a reading-like monologue.

In Group 2.2, 2.2% were content just to draw and label the drawings. Another 2.2% wrote by scribbling and employed oral monologue to read. 26.7% wrote with letter-like forms, of which 4.4% refused to read, 2.2%

labeled the drawings, 11.1% employed oral monologue and 8.9% reading-like monologue. The prominent category of writing for Group 2.2 was that of letter strings I in which belonged 35.6% of the written samples. 2.2% of them refused to read, 2.2% labeled the drawings, 13.3% employed oral monologue and 17.8% reading-like monologue. Lastly, 33.3% of the written samples was categorized in the letter strings II category, of which 4.4% labeled the drawings, 4.4% employed oral monologue and 24.4% reading-like monologue.

In the "message" text (Table 3) more than one out of four (27.4%) of Group 1 just drew. 6.5% refused to "read," and 21% narrated a story based on their drawing. Of the pupils who wrote by scribbling (17.7%), 3.2% refused to write, 6.5% narrated a story, 6.5% employed oral monologue and just 1.6% had reading-like monologues. The prominent category of writing was letter-like strings (30.6% of pupils) of which 6.5% refused to read, 8.1% narrated a story, 12.9% employed oral monologue and 3.2% reading-like monologue. 19.4% of the written samples of Group 1 pupils was categorized in the letter strings I category, of which 6.5% refused to read, 9.7% employed oral monologue and 3.2% reading-like monologue. Lastly, only 4.8% of the written samples was categorized in the letter strings II category, of which 1.6% employed oral monologue and 3.2% reading-like monologue.

In Group 2.1 almost one out of four pupils (23.1%) was content just to draw. Of those, 4.6% refused to "read" and 18.5% narrated a story. 10.8% scribbled and of those, 4.6% refused to write, 3.1% narrated a story, and 3.1% employed oral monologue. 23.1% wrote with letter-like forms, of which 7.7% refused to read, 10.8% narrated a story and 4.6% employed oral monologue. 36.9% of the written samples of Group 2.1 were categorized in the letter strings I category, of which 1.5% refused to read, 7.7% narrated a story, 15.4% employed oral monologue and 12.3% reading-like monologue. Last, 6.2% of the pupils' written samples were categorized in the letter strings II category. Of those, 1.5% refused to read, 3.1% employed oral monologue and 1.5% reading-like monologue.

In Group 2.2, 6.7% of the pupils were content just to draw. Of those, 4.4% refused to read and 2.2% narrated a story based on the drawings. Just 2.2% wrote by scribbling and narrated a story. 22.2% of pupils wrote letter-like forms, of which 15.6% employed oral monologue and 6.7% reading-like monologue. The prominent category of writing for Group 2.2 was letter strings I (51.1%). From this group, 4.4% refused to read, 15.6% narrated a story, 22.2% employed oral monologue and 8.9% performed a reading-like monologue. Last, 17.8% of the pupils' written samples were categorized in the letter strings II category, of which 4.4% employed oral monologue and 13.3% reading-like monologue.

The comparative examination of literate performance of the two texts reveal that writing and reading the message seems to be a more demanding

task for very young children than writing and reading the list. In both writing and reading performances, a less mature category emerged in the messages for all three groups. The percentage of children content to draw the message (20.3% of total) is almost four times that of the list (5.8%). This is also the case in reading. The percentage of children who refused to read the message (18.6% of total) is more than double for the list assignment (8.7%). Moreover, the percentage of written samples categorized at the more mature level of writing was 22.7% for the list and just 8% for the message. 36.8% of pupils could combine the reading with the written text (reading-like monologue) in the list but just half of them (16.9%) managed that for the message.

Less mature literacy styles for the message could be explained by accounting for the different context of each text. Although both constitute written texts, the list could be conceptualized as a catalogue of written objects related to "extra-linguistic" associations labels, while the message contains the pattern of a properly structured written text. Therefore, it seems easier for pre-schoolers to correlate what they had written by naming or labeling some things derivable from features of the material environment (more contextualized) than to correlate a whole text, with proper "clauses" and more symbolic (decontextualized) meaning, to their writing (Cloran, 1994; Nagy & Scott, 2000).

To find out the effect of years of schooling in literacy acquisition, we compared reading and writing performances of Group 2.1 and 2.2. The subjects of these groups are the same age but differ in years of school attendance (Group 2.1: 0 and Group 2.2: 1 year of schooling). The Mann–Whitney Test showed no statistically significant difference for the text type "list" (Writing: $Z = -1.886$, $P = .059$, Reading: $Z = -1.819$, $P = .069$) but did reveal statistically significant differences for the text type "message" (Writing: $Z = -3.225$, $P = .001$, Reading: $Z = -2.955$, $P = .003$). These findings suggest that school does affect literacy performances by encouraging the use of decontextualized language evident in the social literacy perspective (Painter, 1996, 1999, Williams & Hasan, 1999).

To determine the effect of age, we compared the literacy performances of Group 1 and Group 2.1. The groups differed in age (subjects of Group 2.1 are one-year older than subjects of Group 1) but had not attended school before. The Mann–Whitney Test showed no statistically significant difference between writing and reading performances except for the writing of text type list ($Z = -2.277$, $P = .023$). This difference could be explained by noting that the dominant category of writing for text type "list" (Table 2) was letter-like forms (41.9%) for Group 1 and 26.2% for Group 2.1. In the letter strings (categories of writing 4 & 5), the percentage of Group 2.1 (52.4%) was much higher than for Group 1 (29%). Thus, it is plausible to assume that one year

outside of schooling seems to contribute to the discrimination of alphabet letters but not to the engagement and active participation in literacy practices.

Since the findings for Group 1 and Group 2.1 reflect home literacy practices to some extent, questions arise concerning the contribution of typical Greek family environment to the emergence of literacy, the kind of practices employed, and the expectations and attitudes of the parents, though they require answers exceeding the scope of this study.

3. Discussion

We attempt in this paper, to study what processes Greek kindergarteners in pre-alphabetic phase of writing reveal within the context of written production. When one glances at the first attempts of writing (scribbling) by very young children they will not probably notice any identifiable letters or words. Writing seems to be composed of wavy lines or loops and tall sticks. On the other hand, it is clear that they are not drawing. Children themselves characterize these as "writing." They usually move these marks outside the limits of the drawing to maintain the distinction between the drawing and writing (Ferreiro, 1984). As the perceptual theory of learning (Gibson & Levin, 1975) argues, at first, children make gross distinctions of the environmental signs and gradually, through experience, move to finer ones. Thus, some children start writing by attempting the whole (entire written lines) and only later, attempt to write marks.

Children's early letter-like forms hardly resemble conventional writing. Garton and Pratt (1989) argue that "ball and stick" writing shows that children have extracted two main features of the printed form – letters are made of straight and curved lines. In addition, the percentage of those children who know the letters of the alphabet is quite high. Even though letters strings were used randomly, without corresponding sounds, one could not ignore that these children demonstrated knowledge of the features of the letters; that is, they distinguish one from another. This knowledge will force children to search what letters stand for and discover the relationship between letters and phonemes (Clay, 1998).

Even the more elementary samples seem highly dynamic, and demonstrate an noticeable amount of literate knowledge. Our results provide evidence that kindergarteners attempt to orchestrate the different facets of "*the written language kaleidoscope*" (Dyson, 1985: 118). First, they seem to understand the symbolic nature of written language; that is, the difference between written language and drawing. Second, their written texts provide evidence that early on – before formal teaching – they test different hypotheses about the visual or graphic semiotic aspects such as

directionality, letter forms, and spacing between the words. Scribbles are written in lines on a horizontal plane, letter-like signs display the vertical and horizontal lines, circles, semi-circles and arcs which are found in letters, and the quantity and variety of the letters used for a word (usually 3–9) shows that children are curious about the required number of letters for a word.

Through their writing and reading, children provided a wealth of information about their knowledge and the typical function and the content of the two texts types they composed. They possess considerable knowledge of communicative functions and formats of the most common text types. Hence, we think these early writing attempts constitute an important foundation of their concept of the structure and function of the written word.

Moreover, our findings concerning the strong interplay between writing and reading strengthen trends towards more holistic approaches to literacy development. Last, but not least, we suggest some educational implications, particularly the role of time for beginning school and the role of teachers. As our results show, a significant difference exists between children of the same age, but different starting ages for kindergarten (Group 2.1 and Group 2.2). These findings reinforce our assumption of the contribution of schooling to literacy emergence and confirm previous studies (National Center for Education Statistics, 1995), that suggest the positive effect of kindergarten education to literacy development. We found that even in a "traditional" school setting (such as a common Greek kindergarten) children, given the chance, convey high literacy performances.

As mentioned before, Greek kindergartens have begun to embed literacy activities in the daily program to prepare children to learn, read and write as a key priority since kindergarten can play a critical role in the emergence of literacy. Its challenge is to bridge the gap between home and formal schooling by extending and reinforcing home literacy practices, and creating contexts where speaking, reading and writing can occur for real and meaningful purposes.

Although no widespread agreement about direct instruction of certain skills (e.g., phonemic awareness, letter–sound correspondence) exists, we aimed, in this paper, to highlight the role of more contextualized uses of literacy experiences in the frame of "socio-cultural, developmental perspective" (Newman, 1998). From this perspective, the primary challenge for kindergarten teachers is to create a classroom environment that facilitates children's participation in literacy activities through play (Hall and Robinson, 1997; Pellegrini & Galda, 2000; Soderman, Gregory & O'Neil, 1999). In this context, we envision the teachers as facilitators and participants rather than instructors. Through active participation and interaction with children, teachers will provide "scaffolding" (Tharp & Gallimore, 1988) experiences to build new knowledge and achievement.

Appendix

Categories of Writing Systems

1. *Story-related drawings:* The child draws. S/He may write his/her name but there are no other marks except from drawings. It is not considered writing by the children themselves (Figures 1 and 2).
2. *Scribbling:* The child writes scribbles, which are arranged in rows across the page and in many cases they are composed by loops and tall sticks repeated over and over again or imitate handwriting. The children characterize these scribbles as writing (Figures 3 and 4).
3. *Letter-like forms:* The child writes with marks that resemble manuscript or cursive letters, but may, also, include geometrical schemes, flags, small drawings (Figures 5 and 6).

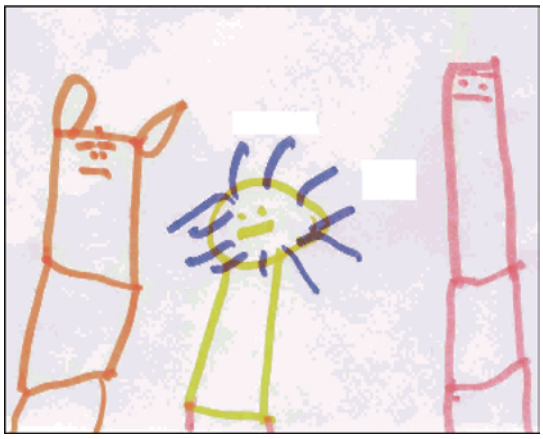

Figure 1. Aleka's list – Y2. Reading: "Teddy bear, doll, wolf."

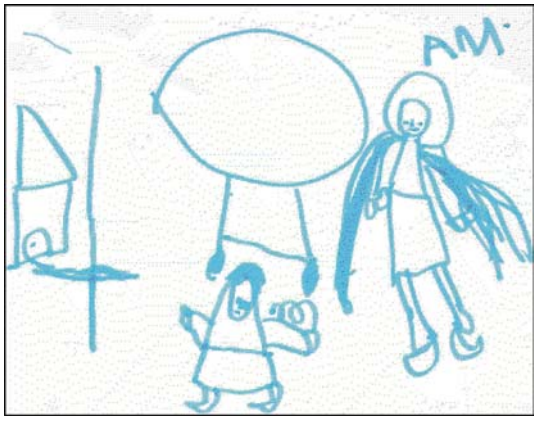

Figure 2. Andreas' list – Y1. Reading: "A house, a parachute, a doll and a doll with a cape, like Little Red Riding Hood."

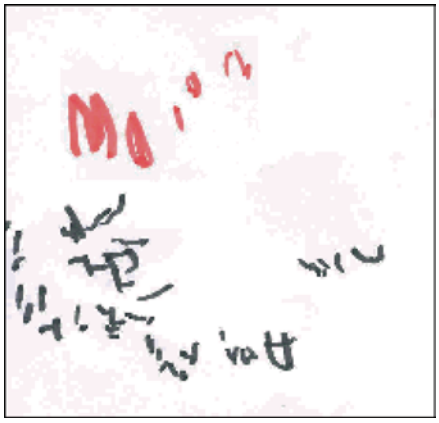

Figure 3. Stefanos' list – Y2. Reading: "A power-ranger, a yellow one, a red one, a blue one, another red one, a spiderman." In his name ΣΤΕΦΑΝΟΣ the two "Σ" have been inverted as "M."

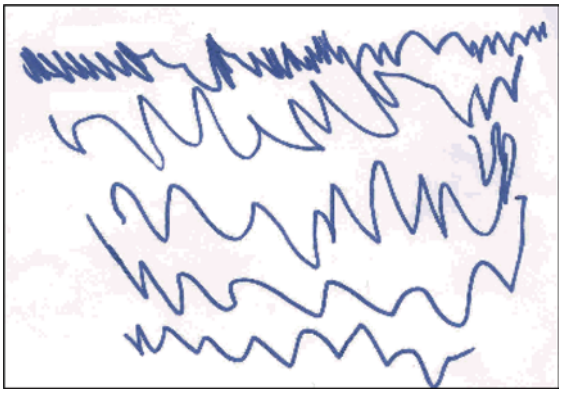

Figure 4. Sotiris' list – Y2. Reading: "Action-man, motorcycle, teddy-bear, castle, soldiers." (an object for each line).

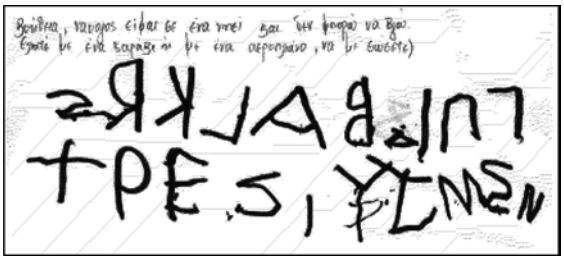

Figure 5. Gerasimos' message – Y2 (left-handed, Direction: Boustrophidon – Right to left and left to right). Reading: "Help, I am a castaway and I cannot get out. Come with a ship or an aeroplane to save me."

Figure 6. Dimitra's list – Y1. Reading: "Ball, doll, band."

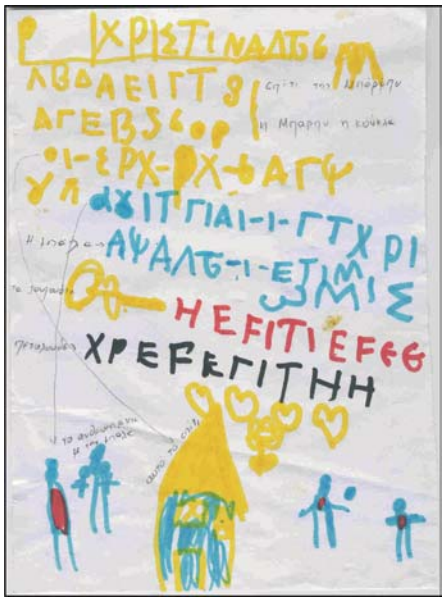

Figure 7. Chistina's list – Y2. Reading: "Barbie's house, Barbie doll, house, ball, flowers, butterflies."

4. *Letter strings I:* The writing is composed by the letters of the alphabet. In many cases the majority comes from the name of the child. Most letters are usually in upper cases and the letters cover the entire row. Children of this category seem to have understood the *principle of internal qualitative variations*, according to which signs or letters should be different in order to be readable (Ferreiro, 1985) (Figures 8, 10, 12 and 13).
5. *Letter strings II:* The writing is composed by the letters of the alphabet and words of groups of three to eight letters, which implies that children have understood not only the *principle of internal qualitative variations* but also, the *principle of minimum quantity*, according to which a certain number of signs or letters constitute a word (Ferreiro, 1985) (Figures 7, 9 and 11).
6. *Partial alphabetic or alphabetic writing:* The child knows that letters represent phonemes and tries to hear them and then to write them down. At an initial point

Figure 8. Mirto's message – Y2. Reading: "I need help. I want you to help me. Run immediately to take me very quickly. Be well all of you and come all together to save me. I am fine and when you will come I want to go away very quickly. I have a bad time."

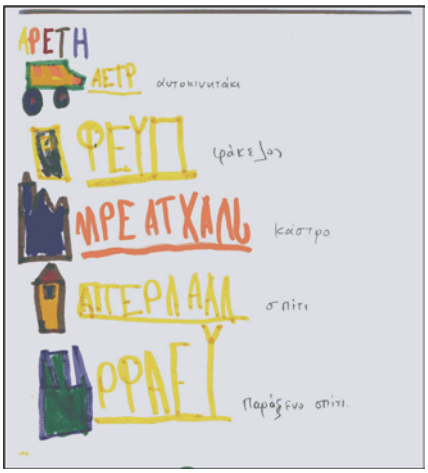

Figure 9. Areti's list – Y2. Reading: "A small car, an envelope, a castle, a house, a strange house."

they write only the first letter or only some of them – mainly consonants. In some cases there are no spaces between the words. These samples have not been taken into account in this study.

7. *Logographic writing:* The child writes some words by heart, which are usually names or common and beloved logotypes (Figure 14).

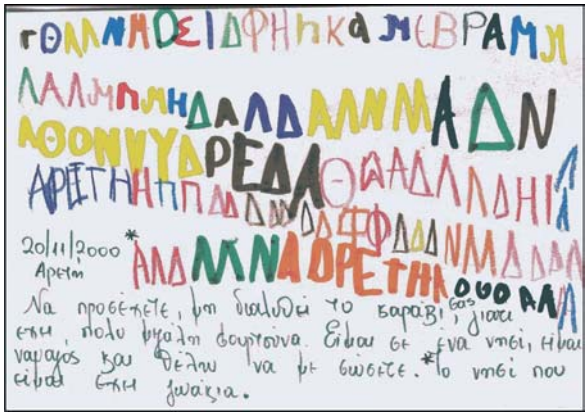

Figure 10. Areti's message. Reading: "Be careful for your ship not to be broken up, because of the storm. I am on an island, I am a castaway and I want you to save me. The island I am on has animals."

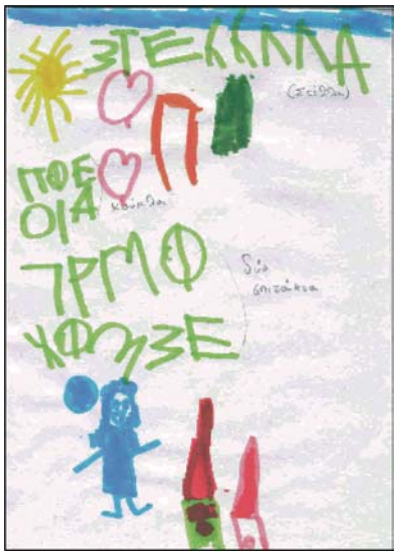

Figure 11. Stella's list – Y2. Reading: "Doll, two houses."

Categories of Forms of Reading

1. *Refusal:* The child refuses to read even though s/he may have written some marks or letters.
2. *Labeling or Narration*: The child labels the items s/he has drawn or narrates the story (Figures 1 and 2).
3. *Oral monologue:* The child says what s/he has written without looking at the paper with a flowing intonation (Figures 3, 5, 6 and 10).

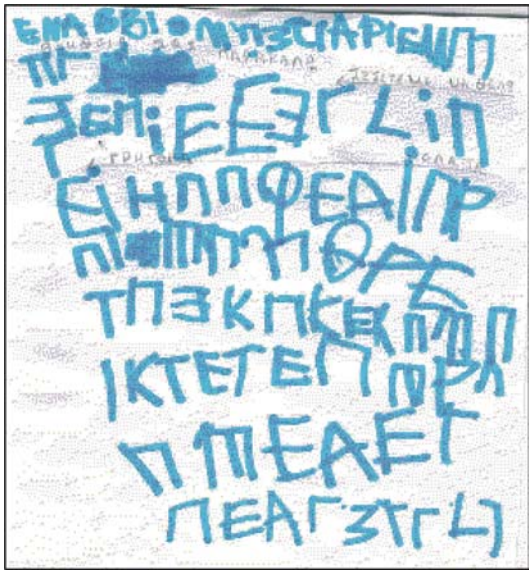

Figure 12. Stella's message – Y2. Reading: "Help, please. I want you to save me. Come quickly."

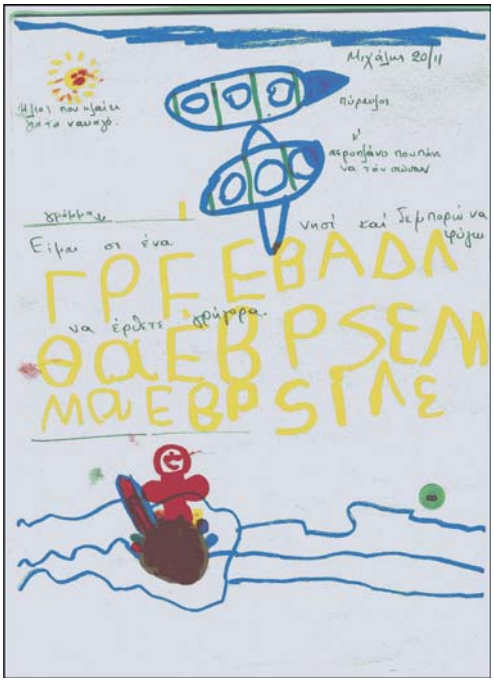

Figure 13. Michalis' message – Y2. Reading: "I am on an island and I cannot get out. Come quickly."

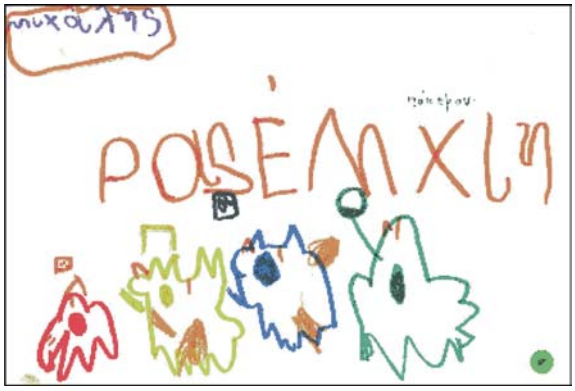

Figure 14. Michalis' list – Y2. Reading: "Pocemon" – Logographic writing.

4. *Reading-like monologue:* The child "reads" what s/he has written showing with his/her finger or with the eyes on the print. The intonation sounds like conventional reading done by an accomplished reader (Figures 4, 7, 8, 9, 11, 12, 13 and 14).

Based on Sulzby, E., Barnhart, J. & Hieshima, J. (1989). Forms of writing and rereading from writing. In J. Mason (Ed.), *Reading–writing connections* (pp. 31–63). Boston: Allyn & Bacon.

References

Baghban, M. (1984). *Our daughter learns to read and write: A case study from birth to three*. Newark, Delaware: International Reading Association.

Bissex, G. (1980). *Gnys at wrk: A child learns to read and write*. Cambridge, Massachusetts: Harvard University Press.

Campbell, R. (1996). *Literacy in nursery education*. Staffordshire: Trenthman Books.

Chapman, M. (1994). The emergence of genres. *Written Communication*, *11*(3), 348–380.

Clay, M. (1991). *Becoming literate: The construction of inner control*. Auckland: Heinemann.

Clay, M. (1998). *By different paths to common outcomes*. York, Maine: Stenhouse.

Cloran, C. (1994). *Rhetorical units and decontextualisation: An enquiry into some relations of context, meaning and grammar*. Monographs in Systemic Linguistics. Nottigham: Department of English Studies, University of Nottigham.

Cooper, D.J. (2000). *Literacy: Helping children construct meaning*. Boston, Massachusetts: Houghton Mifflin.

Dyson, A.H. (1985). Individual differences in emergent writing. In M. Farr (Ed.), *Advances in writing research, Vol. 1: Children's writing development* (pp. 59–126). Norwood, New Jersey: Ablex.

Ehri, L.C. (1999). Phases of development in learning to read words. In J. Oakhill & R. Beard (Eds.), *Reading development and the teaching of reading* (pp. 79–108). Oxford: Blackwell.

Ferreiro, E. (1984). The underlying logic of literacy development. In H. Goelman, A. Oberg & F. Smith (Eds.), *Awakening to literacy* (pp. 154–172). Portsmouth, New Hampshire: Heinemann.

Ferreiro, E. (1985). Literacy Development: A psychogenetic perspective. In D.R. Olson, N. Torrance & A. Hildyard (Eds.), *Literacy, language and learning: The nature and consequences of reading and writing* (pp. 217–228). Cambridge: Cambridge University Press.

Ferreiro, E. & Teberosky, A. (1982). *Literacy before schooling*. London: Heinemann Educational.

Garton, A. & Pratt, C. (1989). *Learning to be literate: The development of spoken and written language*. Oxford: Basil Blackwell.

Gentry, J.R. (1982). An analysis of developmental spelling in GNYS AT WORK. *The Reading Teacher*, *36*, 192–200.

Giannikopoulou, A. (2002). *Written language in kindergarten* (In Greek). Athens: Kastaniotis.

Gibson, E. & Levin, H. (1975). *The psychology of reading*. Cambridge: MIT Press.

Glazer, S.M. & Burke, E. (1994). *An integrated approach to early literacy*. Boston, Massachusetts: Allyn and Bacon.

Gorman, T.P. & Brooks, G. (1996). *Assessing young children's writing: A step by step guide*. London: Basic Skills Agency.

Gough, P.B. & Wren, S. (1999). Constructing meaning: The role of decoding. In J. Oakhill & R. Beard (Eds.), *Reading development and the teaching of reading* (pp. 59–78). Oxford: Blackwell.

Hall, N. (1999). *The emergence of literacy*. London: Hodder & Stoughton.

Hall, N. & Robinson, A. (1997). *Exploring writing and play in early years*. London: David Fulton Publishers.

Harste, J., Woodward, V. & Burke, C. (1984). *Language stories and literacy lessons*. Portsmouth, New Hampshire: Heinemann Educational Books.

Hiebert, E.H. (1986). Issues related to home influences on young children's print-related development. In D.B.Yaden & S. Templeton (Eds.), *Metalinguistic awareness and beginning literacy: Conceptualizing what it means to read and write* (pp. 145–158). Portsmouth, New Hampshire: Heinemann.

Kondyli, M. (2000). *Educational activities for the communicative use of language*. Athens: Ellinika Grammata [in Greek].

Langer, J.A. (1986). Reading, writing and understanding: An analysis of the construction of meaning. *Written Communication, 3*, 219–267.

Luria, A. (1983). The development of writing in the child. In M. Martlew (Ed.), *The psychology of written language: Developmental and educational perspectives* (pp. 237–277). Chichester, UK: John Wiley and Sons.

Miller, W. (2000). *Strategies for developing emergent literacy*. Boston, Massachusetts: Mc Graw Hill.

Ministerial Decree C1/58 (FEK. 93/ V. B'/ 10-2-1999). Curriculum of Greek language in pre-primary education – kindergarten and elementary school [in Greek].

Morrow, L.M. (1994). *Family literacy: New perspectives, new opportunities*. Newark, Delaware: International Reading Association.

Nagy, W. & Scott, J. (2000). Vocabulary processes. In M. Kamil, P. Mosenthal, P.D. Pearson & R. Barr (Eds.), *Handbook of reading research,* Vol. III (pp. 269–284). Mahwah, New Jersey: Lawrence Erlbaum.

National Center for Education Statistics (1995). *Approaching kindergarten: A look at preschoolers in the United States. National Household Education Survey*. US Department of Education, Office of Educational Research and Improvement.

Newkirk, T. (1989). *More than stories*. Portsmouth, New Hampshire: Heinemann Academic Press.

Newman, S. (1998). How can we enable all children to achieve? In S. Newman & K. Roskos (Eds.), *Children achieving: Best practices in early literacy* (pp. 5–10) Newark, Delaware: International Reading Association.

Painter, C. (1996). The development of language as a recourse for thinking: A linguistic view of learning. In G. Williams & R. Hasan (Eds.), *Literacy in society* (pp. 50–85). New York: Longman.

Painter, C. (1999). Preparing for school: Developing a semantic style for educational knowledge. In F. Christie (Eds.), *Pedagogy and the shaping of consciousness: Linguistic and social processes* (pp. 66–87). London: Cassell.

Papoulia–Tzelepi, P. (2001). *Emergence of literacy: Research and practice*. Athens: Kastaniotis [in Greek].

Pellegrini, A.D. & Galda, L. (2000). Cognitive development, play and literacy: Issues of definition and developmental function. In K.A. Roskos & J.F. Christie (Eds.), *Play and literacy in early childhood: Research from multiple perspectives* (pp. 63–74). Mahwah, New Jersey: Lawrence Erlbaum.

Smith, J. & Elley, W. (1998). *How children learn to write*. London: Paul Chapman Publishing Ltd.

Soderman, A.K., Gregory, K.M. & O'Neil, L.T. (1999). *Scaffolding emergent literacy. A child-centered approach for preschool through G5*. Boston: Allyn and Bacon.

Stewart, J. (1992). Kindergarten students' awareness of reading at home and in school. *Journal of Educational Research*, *86*(2), 95–104.

Sulzby, E. (1985). Kindergarteners as writers and readers. In M. Farr (Ed.), *Advances in writing research, Vol. 1: Children's early writing development* (pp. 127–199). Norwood, New Jersey: Ablex.

Sulzby, E., Barnhart, J. & Hieshima, J. (1989). Forms of writing and rereading from writing: A preliminary report. In J. Mason (Ed.), *Reading–writing connections* (pp. 31–63). Needham Heights, Massachusetts: Allyn & Bacon.

Sulzby, E. & Teale, W. (1996). Emergent literacy. In R. Barr, M.L. Kamil, P.B. Mosenthal & P.D. Pearson (Eds.), *Handbook of reading research,* Vol. II (pp. 727–757). Mahwah, New Jersey: Lawrence Erlbaum.

Tafa, E. (2002). Reading and writing in preschool education: Kindergarten teachers' attitudes towards the new curriculum. In *Psychopedagogic of preschool age*. Vol. I (pp. 201–209). Rethymno: Department of Preschool Education [in Greek].

Teale, W.H. & Sulzby, E. (1986). Emergent literacy as a perspective for examining how young children become writers and readers. In W.H. Teale & E. Sulzby (Eds.), *Emergent literacy: Writing and reading* (pp. vii–xxv). Norwood, New Jersey: Ablex.

Temple, C., Nathan, R., Temple, F. & Burris, N.A. (1993). *The beginnings of writing*. 3rd edn. London: Allyn and Bacon.

Tharp, R.G. & Gallimore, R. (1988). *Rousing minds to life*. Cambridge: Cambridge University Press.

Tierney, R.J. & Shanahan, T. (1991). Research on the reading–writing relationship: Interactions, transactions, and outcomes. In R. Barr, M.L. Kamil, P. Mosental & P.D. Pearson (Eds.), *Handbook of reading research,* Vol. II (pp. 246–280). New York: Longman.

Topping, K. & Wolfendale, S. (1995). The effectiveness of family literacy programmes. *Reading*, *29*(3), 26–33.

Voineskou, Z. (2001). *Kindergarten teachers' conceptions for teaching language in kindergarten*. Postgraduate dissertation. Patra: Department of Early Childhood Education.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, Massachusetts: Harvard University Press.

Whitehurst, G. J. & Lonigan, C.J. (2001). Emergent literacy: development from prereaders to readers. In S.B. Neuman & D.K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 11–29). New York: The Guilford Press.

Williams, G. & Hasan, R. (1999). Introduction. In G. Williams & R. Hasan (Eds.). *Literacy in society* (pp. xi–xxi). New York: Longman.

Zecker, L. B. (1996). Early development in written language: Children's emergent knowledge of genre-specific characteristics. *Reading and Writing: An Interdisciplinary Journal*, *8*, 5–25.

Zecker, L. B. (1999). Different texts, different emergent writing forms. *Language Arts*, *76*(6), 483–490.

Section of Social Theory and Analysis
Department of Early Childhood Education
University of Patras
265 00 Rion – Patra
Greece
E-mail: nekstel@upatras.gr