A longitudinal case study of a preschool-age child's acquisition of writing

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Abstract: This article refers to a longitudinal case study, the main aim of which was to depict the development of the writing skills of a child from a high social class background, called Andreas, during the phase of his emergent/early literacy. The writings Andreas produced during literacy events that took place in his family environment from his birth until his entrance in primary school were assessed using the child's intended purpose and text characteristics as the main axes, while a series of supplementary data was also examined. The results of the in-depth analysis of the written productions provided a satisfactory outline of the process for Andreas' acquisition of the writing code as this developed over time, and they also brought to light the reasons that prompted him to write.

Introduction

Recent decades have seen a consensus of opinion amongst members of the academic community that the roots of literacy are to be found in the first years of life (Barratt-Pugh & Rohl, 2020), and this is supported by a significant body of studies (Ahmad & Share, 2021; Morgan et al., 2009). However, the kind of research that examines the development of the phenomenon of literacy during its emergence is somewhat one-sided since, for practical reasons, it has been limited to children attending kindergarten, or who are looked after in nursery school (Hand et al., 2024; Puranik & Lonigan, 2011). Research approaches of this type provide important data, at the same time though they fail to capture holistically the phenomenon under investigation, leaving significant aspects of it hidden from view. A more suitable method for the holistic investigation and adequate depiction of early literacy, is the case study.

The capital importance of the case study in the amplification of scientific knowledge surrounding natural literacy has been highlighted by a large number of researchers (Whitmore et al., 2005). Nevertheless, little of this kind of research is to be found in the international literature (Bissex, 1980; Kress, 1997; Martens, 1996; Stellakis, 2009; Trushell, 1998). In the light of this, we proceeded to the planning and implementation of our study, focusing on an aspect of early literacy that hasn't been studied adequately so far, the development of writing skills.

The Present Research: Aim and Questions

The main objective of our research was the in-depth study and detailed depiction of the developmental course of a child's writing abilities during the phase of his emerging/early literacy. Within this framework, we attempted to answer two main questions:

1)   In what way does a preschool age child's writing abilities develop towards the conventional way of writing?

2)   What are the reasons that prompt the child to write?

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Method

The method that was preferred and adopted was the longitudinal, descriptive, single case study of one individual. Within this context various qualitative techniques were used, although in certain instances quantitative techniques were used as well (Mukherji & Albon, 2022; Yin, 2014).

Data Processing

The empirical research was conducted over two different time periods: The first period lasted five years and ten months, starting essentially from Andreas' birth and ending when the child began attending primary school at the age of five years and ten months (5;10). It involved the data collection, which was carried out by Andrea's parents, the father being an academic with knowledge on early literacy. The method for collection and archiving of research data was determined by the academic first researcher, who adopted an ethnographic approach (Baynham, 2004; Gillen & Hall, 2013) that enabled the parents to gather a significant body of data through the utilization of various techniques. The parents continuously observed Andreas during his involvement in *literacy events* (Heath, 1982) (communicative instances with any kind of reading or composition of text), sometimes participating themselves or not. In this way, the parents managed to systematically gather the child's written productions, taking care to record field notes regarding the date each was produced, anything the child said about his production, the circumstances of the communicative instance and any other information they judged necessary for the adequate recall of the literacy event within the context of which the production took place. Besides the written productions, the parents gathered a lot of Andreas' oral productions, recording them word for word in notebooks, and keeping notes on them. Where possible, they used additional methods for recording, either sound recording, photographing and/or videoing Andreas during his interactions with them, with his brother or with other individuals from their wider family environment (grandmothers, godmother, cousins, etc.). In any case, implementing the research design guidelines, parents collected the data in a strictly objective manner, making sure that no subjective comments or other opinions were included in their field notes.

The second period endured nearly one year, from Andreas' age of (6;10) to age of (7;10). During this period, the inquiry was planned and carried out by the first researcher and one of his MSc students (hereafter, he will be referred to as "second researcher"). Starting from Andreas' age (6;10) and ending at age (7;6), the second researcher paid a series of nine (9) visits to the family home, as well as visits to other places they frequented (beach, playground), during which it was made possible to observe Andreas, to get to know him, as well as to collect data on the pedagogical views and literacy practices of the family through unstructured interviews in the form of informal conversations (Johnson, 2010). Throughout those visits, no data were collected directly from the interaction with Andreas, since he had already begun attending primary school. The processing of the latter data by the second researcher made possible the determination of the social background Andreas comes from and the highlighting of his family's theoretical assumptions on literacy. At this certain period, Andreas' written productions were archived and thoroughly analyzed in depth by the second researcher, as following. During this process, the first researcher was closely following the progress, keeping notes for any disagreement or reflection, but avoiding intervening. Before exporting the final results, the first researcher gave the second researcher a body of literature, relevant to the issues he had identified that he was concerned about. After the necessary changes were made by the second researcher, the results were scrutinized by both the researchers, with the first intervening only for expressing reflections and never taking the initiative for expressing opinions straightforwardly. Finally, the conclusions were extracted by the second researcher, were discussed by both the researchers and, after an agreement between them, the final text was compiled.

Ethical considerations were taken into account since the research subject was under-age (British Educational Research Association, 2011; Flewitt, 2005). Furthermore, the protection of the child's rights was guaranteed during the research and when writing the text of the publication, utilizing a range of strategies (Huser et al., 2022). In this context, parental informed consent had been ensured by obtaining a letter of consent from both of them, on conditions of confidentiality and anonymity. Additionally, operating under the guidelines of EECERA's Code of Ethics (Bertram et al., 2016) and of Ethical Research Involving Children

(Graham et al., 2013), we provided Andreas the opportunity to provide his informed assent, too. In particular, he was informed from the outset that the visitor (i.e. the second researcher) was conducting research about young children's writing and he would like to meet him, to get to know him and use manuscripts produced by Andreas when he was younger. Andreas, already familiar with the concept of "research" as part of his father's job and because similar actions had taken place in his school, manifested no objection and willingly gave his permission. The agreement was sealed by a warm handshake, after Andreas' initiative. During the visits, the second researcher had the chance to gain the child's trust while participating in his everyday interactions (Corsaro, 2003). Moreover, the second researcher was vigilant in ensuring Andreas' informed assent was constantly negotiated and reaffirmed throughout their interactions. For example, Andreas reassured his assent by asking to be photographed with the second researcher during their interactions or by asking him to pay more visits soon. Although the second researcher chose the places of the visits based on avoiding restrictions of Andreas' freedom of movement and often reminded Andreas of his right to withdraw, Andreas never expressed any discomfort or signs of dissent during the visits, verbally or non-verbally (Broadhead & Burt, 2012; Huser et al., 2022; Markström & Halldén, 2009).

The need to define the body of texts that would be included in our study led us to the use of the term "*written production*" for any **depiction** by the subject of our study that met cumulatively the following criteria: first, it either had a permanent character on paper or had a non-permanent character on some other surface but had been recorded/captured by the parents; second, it included one or more symbols that could be recognized as letters or which the writer referred to as letters; third, its content, whether legible or not, could be considered to be a message.

The written productions were classified based on two main criteria: the purpose that the writer wished them to serve and the characteristics of the text. Using the criterion of the writer's desired objective, the written texts were divided into four categories (Cairney & Ruge, 1998): i) Texts for establishing or maintaining relationships, ii) Texts for accessing or displaying information, iii) Texts for pleasure and/or self-expression & iv) Texts for skills development (Table 1).

Table 1

Model for the Categorization of Written Productions Based on the Criterion of the Intended Purpose of Production (based on Cairney & Ruge, 1998)

Category of Written Production	Purpose of Written Production	Examples	Correlated Communication Factor
Category (i)	Establishment/maintenance of relationships	• letters • greetings cards • invitations • notes to someone else	Receiver
Category (ii)	Access to information/presentation of information	• menu • recipes • lists (*for shopping, toys, etc*) • maps • homemade newspapers • scoring	Transmitter or receiver
Category (iii)	Pleasure/self-expression	• practice writing his name • drawing • story writing (*together with drawings*) • personal diary • comics • favourite labels - logos	Transmitter
Category (iv)	Skills development	• exercise books • writing letters of the alphabet (*after being shown by others*)	Code

Similarly, the writings that Andreas produced were placed in categories, ranging from the more primitive emergent writing systems to closer to conventional writing, according to a tool that was constructed based on that proposed by Stellakis (Kondyli & Stellakis, 2005):

A) the Pre-Alphabetic phase, which includes the sub-categories:

A1) repeated linear/circular "scribbling", A2) Pseudo-letters & A3) Random acceptable letters.

B) the Partial Alphabetic phase, which includes the sub-categories:

B1) Initial letter, B2) Syllabic spelling & B3) Some letters of the word.

C) The Full Alphabetic phase and

D) The Consolidated Alphabetic or Partial Orthographic Phase (Table 2). Representative examples of Andreas' productions, following the aforementioned categorization, are listed in the Appendix IV.

Table 2

Model for the Categorization of Written Productions Based on the Criterion of Text Characteristics (based on Stellakis, 2009).

Spelling Phase	Category of Written Production	Text Characteristics	Chief Characteristic Features
Pre-Alphabetic (Absence of alphabetic knowledge)	A1	Linear/circular repeated "scribbling"	a) scribbles, mimicking continuous linear writing b) continuous repetition of the same symbol (usually /O/) or repeated loops - Linearity in the arrangement of symbols (rows across the page), without a distinction between them
	A2	Pseudo-letters	Formal resemblance of the majority of symbols to acceptable letters In some cases integration of other symbols is observed (latin letters, numbers, hearts etc) in the sequences of pseudo-letters - Linearity in the arrangement of the symbols and an attempt at their internal (at the level of 'word') qualitative differentiation
	A3	Random acceptable letters	Random quotation of acceptable letters, either individually or in sequences, which lacks awareness of graphophonemic conventions
Partial Alphabetic (Ability to represent some, but not all, the sounds of the word using letters)	B1	Initial letter	Representation of words using either only their initial letter, or their initial letter followed by other random acceptable letters
	B2	Syllabic spelling	Representation of each syllable of the word with a letter
	B3	Some letters of the word	Representation of the word with some letters that correspond to sounds of it, without an attempt to match each letter to a syllable
Full Alphabetic	C	Full alphabetic or entirely phonetic spelling	Words made up of letters that represent all their sounds but denote an absence of knowledge of the spelling rules
Consolidated Alphabetic or Partial Orthographic	D	Partial or transitional orthographic spelling	Realization of the existence of, and attempt to apply, grammatical (morphological) and etymological/historical rules that, together with phonological rules, determine the conditional/acceptable written form [spelling] of the words

Finally, a series of supplementary data was examined, such as directionality, the existence of elements of multimodality (numbers, arrows, music notes, logos etc), the type of letters (upper-lower cases), the direction of the letters, the use -or not- of letters from the Latin alphabet, the use of punctuation, spaces or other means for leaving a gap between words.

It should be pointed out that the analysis of Andreas' written productions, which was conducted for each of our study's two main questions, was structured on two levels: On the first the data were approached quantitively and on the second a qualitative approach was selected, while the ensuing attempt to combine these approaches creatively was designed to achieve the greatest degree of incisiveness (see the relevant appendices I to III).

Data Analysis

Andreas was born in 2008 and grew up in Greece, in a suburb of the city of Patras, together with his parents and a brother eight years his senior. Greek, Andreas' mother tongue, was used exclusively for the purposes of communication in the family home. His physical and linguistic development can be described as typical one while his family's social background was assessed to be high (Hasan, 1989; Hasan & Cloran, 1990; Williams, 1999), given that his father had been working as a member of the teaching-scientific staff at the University of Patras since before Andreas' birth, and his mother is also a graduate of a Greek higher education institution.

At the same time, the analysis of the unstructured interviews-discussions revealed Andreas' parents' views on literacy, which are clearly oriented towards the ideological or sociocultural model of literacy as opposed to autonomous model (Street, 2003). Their approach casts aside the usual concern for the acquisition of the written symbols of the written code and avoids direct teaching of the code. Instead, it gives priority to the sociocultural dimension of literacy, promoting the development of cognitive skills integrated into the communicative events of everyday life and makes use of authentic, child-initiated and text-centered literacy events. Based on this, and together with their older son who held the same view, they implemented a series of targeted and non-targeted actions and practices (purely indicatively, mention is made of the presence of books and other forms of written texts and writing material in the house, shared/joint book reading, the utilization of the environmental print outside the house and so on) aimed at reinforcing Andreas' ability to develop his literacy skills.

Results

Results Regarding the Text Characteristics

Pre-Alphabetic Phase

The first attempt to handle a writing implement was manifested by Andreas at the age of one year and four months (1;4). Several similar attempts to handle writing/drawing materials followed, and these helped him to become familiar with their use. His first attempt to use symbols was observed at the age of one year and eleven months (1;11) and was an attempt to write his name with circular/repeated "scribbling" after prompting from his family. The first attempt to write on his own initiative came at the age of two years and two months (2;2) and, again, was an attempt to write his own name, once more in this case using symbols of the same category. Reaching the age of two years and ten months (2;10) Andreas wrote something other than his name, on his own initiative for the first time, using circular/repeated writing once again in this case too. This is when the first indications appeared that Andreas understood that writing is characterized by linearity and is arranged horizontally. The awareness of linearity and the horizontal arrangement of writing was consolidated by the age of three years and seven months (3;7), when Andreas was still exclusively using undifferentiated (circular/repeated) writing in his texts. This specific form of writing, a typical sample of which is presented in Figure 1 of Appendix IV, dominated until the age of three years and nine months (3;9), when he wrote his first recognizable, conventional letter (uppercase), which was none other than the first letter of his name, in other words the capital letter -A-. The letters he wrote immediately after his initial letter were the -O-, -X- and -I- of the word "OXI" (meaning "no" in Greek),

which he learnt at the age of three years and eleven months at the nursery school, which he had begun attending approximately one month earlier. The first use of pseudo-letters is observed shortly afterwards, at the age of four years and three months (4;3) (Figure 2 of Appendix IV). A few days later Andreas, on his own initiative, attempted to copy his whole name for the first time, in the conventional way, to sign one of his art productions. For the same reason, and while still four years and three months old (4;3), he makes his first attempt to write his name conventionally, without copying it from somewhere, with the result being far from acceptable. At the age of four years and four months (4;4) the first digits from the decimal arithmetic system make an appearance in Andreas' written texts (the digits -0-, -1- and -9-), and these also constitute the first elements (excluding his drawings) which indicate multimodality in his writings. At the same time Andreas has learnt to write his name in the conventional way, although at this phase he does it from memory (logographically) and not phonologically. From then until the age of four years and eleven months (4;11) Andreas' writings are dominated by his name, written in a logographic way, and random acceptable letters, in other words, letters of a conventional form that do not constitute representations of the sounds or phonemes of the spoken word but are written randomly. Even so, the repertoire of letters that Andreas is able to write up to this time include seventeen (17) capital letters, five (5) of which are vowels (-Α-, -Ε-, -Η-, -Ι-, -Ο-) and twelve (12) of which are consonants (-Ν-, -Δ-, -Ρ-, -Σ-, -Γ-,-Κ-, -Λ-, -Μ-, -Ξ-, -Π-, -Τ-, -Χ-), with the most frequently used being those from his name (-Α-, -Ν-, -Δ-, -Ρ-, -Ε-, -Σ-). Figure 3 of Appendix IV constitutes a typical example of this period, containing the ten capital letters (-Χ-, -Ο-, -Λ-, -Ι-, -Π-, -Α-, -Ν-, -Δ-, -Ρ-, -Σ-). During this time Andreas incorporates symbols from various semiotic systems, such as arrows, crosses, and digits from the decimal arithmetic system in his writings a number of times, using this multimodality to extend his ability to communicate meaning, given that his writing abilities are not at a level to permit him to express all the meanings he wants to express in a more conventional way. In addition, the first indications that Andreas is aware of the particular characteristics of certain types of texts, chiefly those of the letter and the greetings card also make an appearance at this time, confirming that knowledge of genres develops before the acquisition of the skill of conventional writing (Donovan & Smolkin, 2006).

From a quantitative point of view, it is ascertained that until the age of four years and eleven months (4;11), Andreas had created fifty-seven (57) written productions (Appendix I: From A/N: 1 to A/N: 57), in most of which (33) the exclusive element of writing was his name, while in the others his name either co-existed with more writing symbols (scribbles, pseudo-letters or random acceptable letters), or was missing and there were only some of the aforementioned writing symbols. Of these however, only seventeen (17), in other words a percentage of them (29,8%) fulfilled the categorization criteria based on the text characteristics, they included at least one (1) writing symbol excluding his name and were not the result of copying.

Partial Alphabetic Phase

At the age of four years and eleven months (4;11), Andreas produces his first writing utilizing the *alphabetic principle,* which refers to the awareness that certain phonemes are represented by certain letters. Driven by this realization, Andreas uses his –still early– phonological knowledge (phonemic and syllabic division, grapho-phonemic correspondence) to write. Hence, for the following seven (7) months, until the age of five years and six months (5;6), he produces texts in which he applies the alphabetic principle, that every phoneme corresponds to one letter. On the other hand, despite having discovered the mechanism of the *alphabetic principle* and being able to use it to some extent, Andreas still hasn't acquired it completely as he still is unable to represent all the sounds of each utterance that he wants to write in letters. In particular, the analysis of the writings according to text characteristics revealed that in some of them the word was represented only by its initial letter (e.g. Figure 4 of Appendix IV: He writes the initials -Α- for -ΑΓΙΟΣ-, -Γ- for -ΓΕΩΡΓΙΟΣ-, once again -Α- for -ΑΓΙΟΣ- and -Δ- for -ΔΗΜΗΤΡΙΟΣ-), in some one letter was used for the representation of each syllable (e.g. Figure 5 of Appendix IV: He writes -ΣΓΠΜΜΜΜΠΑΔΡΦΛ- instead of the correct -Σ' ΑΓΑΠΩ ΜΑΜΑ ΜΠΑΜΠΑ ΑΔΕΡΦΟΥΛΗ-) and in some others the words were represented by certain letters, which corresponded to speech sounds or phonemes in a manner that revealed no attempt to link each letter to a syllable (e.g. Figure 6 of Appendix IV: He writes -ΣΑΜΙΝΑ-

instead of the correct -ΣΑΛΑΜΙΝΑ-).

In fact, the realization that words are separated into syllables (syllabic awareness) and their multiple handling, understood as analysis and composition, doesn't seem to be especially difficult for him, and certainly not as difficult as the acquisition of phonemic awareness, a finding that is in agreement with the conclusions of similar research (Aidinis & Nunes, 2001; Manolitsis, 2000; Panteliadou, 2001; Sykioti & Kondyli, 2008). In addition, in this period too, Andreas uses elements of multimodality (digits from the decimal arithmetic system, mathematical symbols, "speech bubbles", arrows, logos or even elements that represent those of the Braille semiotic system) in order to transmit meaning on paper.

During this same period, Andreas produced a total of twenty-six (26) writings, the vast majority of which (20 texts or 76.9%) were coded in terms of text characteristics (Appendix I: From A/N: 58 to A/N: 83). In fact, as displayed in Appendix II, a quantitative comparison of the number of texts from this period (it lasted only 7 months, from the age of 4;11 to 5;6) with those from the previous one (from birth to 4;11), as much in terms of absolute values (20 as against 17), as in terms of percentages of the total number of written productions that were ranked based on the criteria of text characteristics (45.5% as against 38.6%), shows that Andreas increased the production of texts that were not restricted to writing his name once he discovered the *alphabetic principle.* This fact seems entirely logical as it expresses his desire, on the one hand, to apply his discovery in order to derive pleasure from his achievement and, on the other, to try out the mechanism so as to become more familiar with it. At the same time, given that Andreas has extended the dynamic meaning-giving that he has at his disposal, it is to be expected that he will want to utilize it to produce messages.

Full Alphabetic Phase

When he turned five and a half (5;6), Andreas arrived at another turning point in the development of his writing skills, the full acquisition of the *alphabetic principle.* For three (3) more months his written productions included words that met the criteria of phonological but not grammatical (morphological) and/or etymological spelling (Gerasis, 2010), that is to say words whose letters represent all the sounds (phonemes or speech sounds) of their spoken form, but at the same time the way they are written reveals ignorance or non-implementation of the grammatical (morphological) and/or etymological rules that determine their orthographically correct writing (e.g. Figure 7 of Appendix IV: He writes -ΚΟΚΙΝΟ ΜΑΡΓΡΙΤΑΡΙ- instead of the correct -ΚΟΚΚΙΝΟ ΜΑΡΓΑΡΙΤΑΡΙ-). Here too Andreas uses elements of multimodality, such as digits from the decimal arithmetic system and logos, to supplement his writing. In addition, the repertoire of letters that Andreas is able to write up to this particular time period has increased to twenty (20) capital letters, in other words it lacks two capital consonants (-Θ- and -Ψ-) and two capital vowels (-Υ- and -Ω-) and doesn't include any lowercases either.

The number of texts written by Andreas at this period amounted to seven (7), five (5) of which (71.4%) were categorized in terms of text characteristics (Appendix I: From A/N: 84 to A/N: 90). This percentage, as can be observed, is similar to the corresponding percentage for the previous period (76.9%) and both are almost equally and noticeably higher than the corresponding percentage for the first period (29.8%). Consequently, as a result of the quantitative analysis, it appears that Andreas' interest in the production of texts in which the writing isn't restricted to depicting his name and isn't the product of copying remains at roughly the same levels as in those which emerged during the time period that followed the discovery of the *alphabetic principle.*

At the age of five years and nine months old (5;9) Andreas started primary school and the texts composed after that time extend the scope of this paper.

The Acquisition of Writing as a Transitional Process. The examination of the data above provides adequate indications in favor of the view that Andreas' acquisition of writing takes place as a transitional process for him from the lower towards the higher levels of a hierarchical scale of phases, passing in order from the Pre-Alphabetic, through the Partial Alphabetic to the Full Alphabetic phase. Not even one of his writings was found that could be ranked, even just in transitional terms, in the Consolidated Alphabetic or

Partial Orthographic Phase, which is due to the fact Andreas started primary school "early". It should be noted, though, that the phases are not strictly demarcated from each other but, rather, the co-existence of elements for two or more phases is possible in the same time period in the child's life, as from a total of forty-four (44) productions seven (7) were found that simultaneously contained elements from two different phases. In addition, it was ascertained that, in a few cases, written productions that were classified in one of the first two phases included elements from two or more sub-categories from the same phase as during the Pre-Alphabetic Phase five (5) such pieces of writing were noted, while during the Partial Alphabetic Phase three (3) pieces of writing were noted.

Knowledge of More Conventional Rules of Writing. At the same time, the scrutiny of more elements in each of the written productions highlighted further interesting data regarding Andreas' knowledge of the conventions that govern the composition of the written world. The first indicators of awareness of the conventional direction of writing (directionality) at word level appeared shortly before Andreas was four and a half, at the age of four years and five months (4;5), during the logographic writing of his name and before the discovery of the *alphabetic principle.* If one excludes his name, which constitutes a special case and as such received separate investigation, it is observed that already from the first textual productions using the alphabetic principle, at the age of four years and eleven months (4;11), Andreas seems to write his words in the conventional direction (from left to right). Meanwhile, when he is called on to solve the problem of lack of space that prevents completion of the writing of the word on the same line, Andreas demonstrates flexibility by arranging the letters in a different way each time, depending on the space available to him. Hence, we observe the depiction of words or phrases written in an irregular direction (e.g "boustrophedon", from left to right and then right to left and so on), as much between different written productions as, in certain cases, within the same production. At the same time though, we did not come across words or phrases written back-to-front or vertically. From the age of five years and two months (5;2) directionality appears to have become consolidated as it dominates fully in all the written texts that were produced from that time. In addition, it was noted that all the acceptable letters that Andreas produced up until he started primary school were capital, while their direction was, in most cases, the conventional one. However, there were still cases where letters were written in reverse (as in a mirror) or were written on a noticeable slant (usually 90 degrees). Besides letters, digits of the decimal arithmetic system were also written in non-conventional directions in certain cases. The use of gaps or other symbols for the separation between words was not observed, although in some cases the writing of different words on different lines could be perceived as an indication of the awareness of the distinction between them. In addition, no punctuation marks or letters from the Latin alphabet were observed, even though, according to the parents' field notes, Andreas recognised some of them.

Finally, the analysis of the writings that were produced from the discovery of the *alphabetic principle* and on revealed some first indications of the patterns of letters omitted during the writing of words. It appears Andreas omits letters from within words, the vast majority of which are vowels and in fewer cases consonants, while in rare cases he fails to depict the initial and last letter of the word. It should be emphatically noted, however, that the observations regarding the letters that were omitted are not the result of systematic investigation and, as such, do not permit tenable interpretation and, consequently, the extraction of generalizable conclusions.

Results Regarding the Writer's Desired Objective

As emerged from the in-depth analysis of the written productions that were scrutinized, in combination with the results of the quantitative analysis that are presented in Appendix III, Andreas' main motive for learning and using writing was the pursuit of his own entertainment and/or self-expression, which led him to the production of the vast majority of his texts (74 out of 90, or 82.2% of all the written productions). Andreas' writings reflect his interests (history, mythology, children's literature, religion, etc.), which in fact seem to be determined to a significant degree by his social gender: we observe him writing, among other things, comics about superheroes (Superman, Spiderman) and aliens, the names of pirates and pirate ships, names of heroes from the Greek revolution against the Ottoman Empire, battle

cries and so on. Conversely, the reason that appears to have the least influence on Andreas' motivation to spend time writing, is located in the category of practising for learning skills, to which only a very small number of his written productions (2 out of 90, or 2.2%) was assigned. In between the extremes of these two forms of motivation, we find the influence of objectives that are linked to the establishment and/or maintenance of relationships as well as the presentation of information, given that the first were found to have prompted Andreas to write texts that correspond to 10% (9 out of 90) and the second to 5.6% (5 out of 90) of the total number of his written texts (9 and 5 out of 90, respectively) (Appendix III).

Bearing in mind that the goal of entertainment and/or self-expression is oriented, for the main part, towards the writer himself (transmitter), we conclude that Andreas seems to write mainly because he finds the activity of writing interesting and pleasant, first of all for himself. Correspondingly, and since the reasons that are related as much to the establishment/maintenance of relationships as those that concern the presentation of information are oriented towards the reader (receiver) of the texts, it appears that Andreas' very next goal when learning and using writing is communication with his family and his wider social environment (relatives, friends, godmother). Finally, Andreas does not appear to find motivation to write in cases where writing is not linked to some communicative context but is oriented towards learning the code per se. This last conclusion is extracted from the discovery that the only texts with this target that he produced are located in the pre-school classroom and emerged after prompting by the pre-school teacher and not on his own initiative.

Finally, it was noted that the reasons that motivated Andreas to write texts do not appear to change significantly over his pre-school years (Appendix III). Consequently, those motives do not appear to be related to the developmental level of his writing skills, which develop from levels distant from the conventional text characteristics to levels much closer to it.

Conclusion and Discussion

The importance of case studies to the field of emergent literacy lies primarily in the fact that they place children in the position of the pivotal informants for their own language development and, also, they render evident the ways in which children are actively constructing knowledge about literacy from birth (Whitmore et al., 2005). In this particular one, the first to be published for a child who masters the Greek alphabetic system, the analysis of the results showed that the research achieved its main objective as it satisfactorily outlined the process for the acquisition of the writing code by Andreas as this developed over time, depicting all the crucial and significant points over its course and shedding light on all the qualities that characterize his writing during the emergence of his literacy.

At the same time, the study highlighted that Andreas' main motive for spending time writing was for his personal enjoyment, followed by the wish to communicate with his family and his wider social environment, while it became clear that he wasn't motivated at all by activities oriented exclusively towards the learning of the code, disconnected from any communicative context, a conclusion that seems to come in agreement with numerous findings of the existing literature (Rodriguez Leon, 2024). Andreas' motives seem to have had a significant effect on the evolutionary process of his writing skills. It should not be disregarded, though, that the motivating factors differ between children, they are subject to each one's interests and eventually, as happened in Andreas' case, they form distinct pathways to writing development by prompting every child to exert agency and to take control of their own learning process (Rowe & Neitzel, 2010).

Furthermore, the in-depth overview of Andreas' route towards the acquisition of the written code could enable early childhood educators to understand the theoretical approaches of emergent literacy and, at the same time, to gain awareness of what is emerging through literacy events and how this emergence occurs. Instructors with this type of sophisticated knowledge about early writing are more likely to provide high quality early writing instructional opportunities in their classes (Bingham et al., 2022).

It should be noted, however, that the restrictions regarding the length of the article did not permit the presentation of the total of the issues that were investigated during the case study of Andreas, some of

which have been mentioned only briefly. The most important (the significance of learning to write his name, the weightiness of the role of the family, the way in which each written production was examined in depth and analyzed) will be the subjects of future publications and, in conjunction with the content of the present article, will allow the fuller understanding of the methodology used for carrying out the research and, chiefly, the deeper understanding of more aspects of the development of Andreas' writing abilities and factors exercising significant influence on it, through the use of "*thick descriptions*" (Geertz, 1973; Gregory et al., 2004).

Limiting Factors – Proposals for Further Research

Apart from the problem of the generalizability of the conclusions extracted (Rule & John, 2015), there was difficulty in handling the large mass of empirical data, while the fact that Andreas began primary school at a relatively young age also had a limiting effect: on the one hand, it made it impossible to determine the point in time when the –new– change in Andreas' text characteristics occurred, or to examine the text characteristics that he would adopt next and, on the other, it didn't allow us to observe the development of his emergent writing skills over a longer time period, at a time in fact when this development appears to speed up. What's more, we can't ignore the fact that the written productions that made up the research data constitute the majority, but not all of Andreas' written productions as some were lost, some were given away and others were torn up or colored in by Andreas himself and were not legible anymore. Nevertheless, the material that was examined is indicative of the course Andreas followed while learning to write as it includes most of his writings, as well as the most characteristic samples of each time period, and covers all his pre-school years.

Concluding with a reference to proposals for further research, there are a number of possibilities and directions. We would suggest the extension of the study of Andreas to include more expressions of the phenomenon of his literacy such as the development of his reading skills over the same time period and the examination of the importance of play (Christie, 2021) and the use of video games and the computer (Burnett & Merchant, 2013) and, moreover, the conduct of similar research with children from families with different pedagogical beliefs and educational background. In any case, the multifactorial nature and the essentialness of the phenomenon of literacy demand that the study of it be continued.

Declarations

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Appendix 1: Classification of written productions based on the criteria of text characteristics and the writer's intended objective

A/N	Age (Year;Month)	Category of Text Characteristics	Category of Writer's Intended Purpose
1	1;11	-	iii
2	2;2	-	iii
3	2;10	A1	iii
4	3;0	A1	iii
5	3;0	A1	ii
6	3;1	A1	i
7	3;3	A1	iii
8	3;3	A1	iii
9	3;7	A1	i
10	3;9	-	iii
11	3;11	-	iii
12	3;11	-	iv
13	4;0	-	iii
14	4;0	A3	iii
15	4;0	A1	i
16	4;3	A2	iii
17	4;3	-	iii
18	4;3	-	iii
19	4;4	A3	ii
20	4;4	-	iii
21	4;5	-	iii
22	4;5	-	iii
23	4;5	-	iii
24	4;5	-	iii
25	4;5	A3	i
26	4;5	-	iv
27	4;5	-	iii
28	4;6	A3	iii
29	4;6	-	iii
30	4;6	-	iii
31	4;7	-	iii
32	4;7	-	i
33	4;7	-	iii
34	4;7	-	iii
35	4;7	A3	iii
36	4;8	-	iii
37	4;8	-	iii
38	4;8	-	iii
39	4;8	-	iii
40	4;8	-	iii
41	4;9	-	iii
42	4;10	-	iii
43	4;10	-	iii
44	4;10	-	iii
45	4;10	-	iii
46	4;10	-	iii
47	4;11	-	iii
48	4;11	A3	iii
49	4;11	A3	iii
50	4;11	A3	iii
51	4;11	B1	ii
52	4;11	-	iii
53	4;11	-	iii
54	4;11	-	iii
55	4;11	-	iii
56	4;11	-	iii

57	4;11	-	iii
58	4;11	B3	iii
59	5;0	B3	iii
60	5;0	-	i
61	5;0	B3	iii
62	5;1	B2	iii
63	5;1	B1	iii
64	5;1	B2	iii
65	5;1	B3	iii
66	5;1	B3	i
67	5;1	B2	iii
68	5;2	B3	ii
69	5;2	B1	ii
70	5;2	-	iii
71	5;2	B2	i
72	5;2	B3	iii
73	5;2	B2	iii
74	5;4	-	iii
75	5;4	B2	iii
76	5;4	-	iii
77	5;5	C	iii
78	5;5	B2	iii
79	5;5	B2	iii
80	5;6	B3	iii
81	5;6	B3	iii
82	5;6	B3	iii
83	5;6	-	iii
84	5;6	C	iii
85	5;7	-	iii
86	5;8	C	i
87	5;9	C	iii
88	5;9	C	iii
89	5;9	C	iii
90	5;9	-	iii

*The highlighted lines (A/N: 58 & 84) indicate the points where a change of phase occurs.

Appendix 2: Written productions (not classified based on any criterion) and written productions that were classified based on the criterion of text characteristics, per phase

Phase	Number of Written Productions	Number of Written Productions (Classified Based On Text Characteristics)	Percentage of Written Productions (Classified Based On Text Characteristics) On Written Productions, Per Phase	Percentage of Written Productions (Classified Based On Text Characteristics) On Total Number Of Written Productions (Classified Based On Text Characteristics)
A	57	17	29,8% (17/57)	38,6% (17/44)
B	26	20	76,9% (20/26)	45,5% (20/44)
C	7	5	71,4% (5/7)	11,4% (5/44)
D	-	-	-	-
UNCLASSIFIED WRITTEN PRODUCTIONS	-	2	-	4,5% (2/44)
TOTAL NUMBER	90	44	-	-

Appendix 3: Number of written productions by category of writer's objective, in relation to the phases that cover the time period during which they were produced and percentage of these in each phase

		Category of Writer's Objective				
		i	ii	iii	iv	Total Number (Per Phase)
Phase	**A**	5 (8,8%)	3 (5,3%)	47 (82,4%)	2 (3,5%)	57 (100%)
	B	3 (11,5%)	2 (7,7%)	21 (80,8%)	0	26 (100%)
	C	1 (14,3%)	0	6 (85,7%)	0	7 (100%)
	D	-	-	-	-	-
Total Number (Per Category of Writer's Objective)		9 (10%)	5 (5,6%)	74 (82,2%)	2 (2,2%)	90 (100%)

Appendix 4: Samples of productions (classified on the criteria of text characteristics)

Figure 1: Sample from the Pre-Alphabetic Phase (Category A1: Linear/circular repeated "scribbling") [A/N written production: 15]
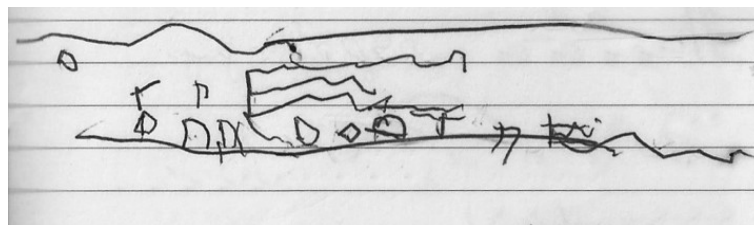

Figure 2: Sample from the Pre-Alphabetic Phase (Category A2: Pseudo-letters) [A/N written production: 16]
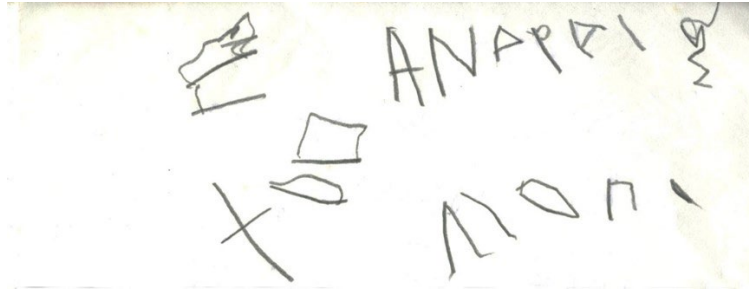
Figure 3: Sample from the Pre-Alphabetic Phase (Category A3: Random acceptable letters) [A/N written production: 25]

Figure 4: Sample from the Partial Alphabetic Phase (Category B1: Initial letter) [A/N written production: 63]
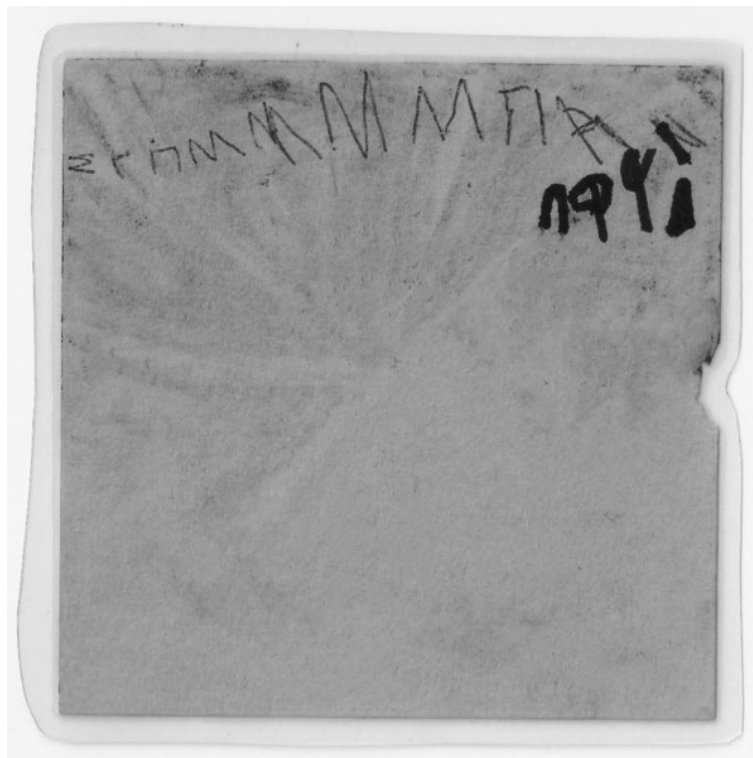

Figure 5: Sample from the Partial Alphabetic Phase (Category B2: Syllabic spelling) [A/N written production: 71]
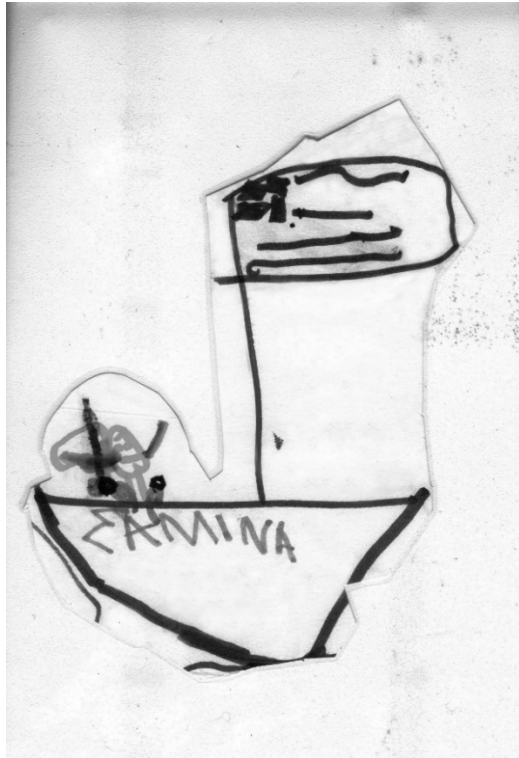
Figure 6: Sample from the Partial Alphabetic Phase (Category B3: Some letters of the word) [A/N written production: 61]
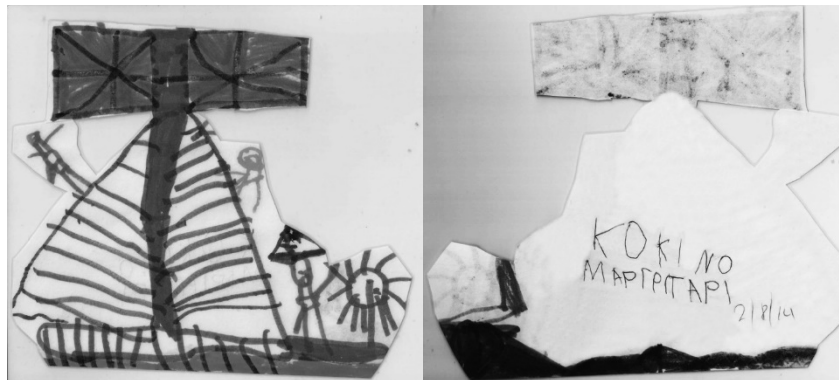

Figure 7: Sample from the Full Alphabetic Phase (Category C) [A/N written production: 87]