

Book review

Written and Spoken Language Development across the Lifespan

Perera, J., Aparici, M., Rosado, E. & Salas, N. (Eds.) (2016). *Written and Spoken Language Development across the Lifespan: Essays in honour of Liliana Tolchinsky*. Cham, Switzerland: Springer International Publishing | ISBN-10: 3319211358

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The present book was edited in honour of Liliana Tolchinsky, to pay tribute to her career as a researcher in the field of writing development. For this purpose, the editors of *Written and Spoken Language Development Across the Lifespan* have brought together researchers from all around the world who wished to share results from studies that reflect Liliana Tolchinsky's influence on their work.

The book starts with an introduction by the editors Perera, Aparici, Rosado and Salas, in which Liliana Tolchinsky's career is described. In this introduction, the reader is embarked on a pleasant travel throughout Liliana Tolchinsky's career, filled with ambitious and innovative projects, international collaborations and awards won. This book comprehends a total of 19 chapters, all aiming at investigating language development. It is divided into two parts: Part I gathers chapters focused on early literacy, while Part II focuses on later literacy development.

This review is organised in two parts. The first part aims at presenting the book, by briefly describing each chapter and showing their specificities and similarities. This part will allow the reader to appreciate the book's richness and diversity in terms of linguistic contexts, participants' characteristics, levels of language investigated and methods of analysis used. In our second part, we discuss the book's contents in relation to Liliana Tolchinsky's career, by linking the chapters to her main interests and contributions to the field of language development.



Gosse, C., & Van Reybroeck, M. (2016). *Written and Spoken Language Development across the Lifespan: Essays in honour of Liliana Tolchinsky* [Book Review]. *Journal of Writing Research*, 9(1), 87-96. doi: 10.17239/jowr-2017.09.01.04

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1. Book contents

The present book is composed of 19 chapters, divided into two parts. The diversity of horizons from which the authors originate implies a variety of languages at stake, participants' characteristics, angles of approach and methods. This part aims at describing the chapters in order to highlight their contribution to the field of writing research. It is worth noting that this review for the *Journal of Writing Research* focuses mainly on writing studies, and not on reading ones. The very first chapter written by R. M. Joshi is an overview of how Liliana Tolchinsky's work has influenced our knowledge about writing development, with historical and theoretical contributions. It will be addressed in the second part of this review.

1.1 Part 1: Early literacy development

There are nine experimental studies in Part I on early literacy, conducted in five different languages: two studies in Hebrew (Aram & Levin; Sandbank), two in English (Dockrell & Connelly; Reilly & Posle), two in Spanish (Shiro; Vernon), one in Dutch (Verhoeven & Van Elsäcker), Catalan (Soler Vilageliu, Sotoca, Lasheras, Ramis & Castella) and French (Veneziano). This gives rich information to the readers, since the languages at stake have different characteristics in terms of orthographic consistency and type of alphabet. While Dutch, Spanish and Catalan present a high level of consistency, with a high regularity in terms of correspondences between phonemes and graphemes, English and French are recognised to be a lot more opaque. Finally, the studies conducted in Israel involve a different alphabet context, the Hebrew alphabet.

Concerning the participants' profiles, three studies were conducted among preschool children, aged around 5 to 6 years old (Aram & Levin; Sandbank; Vernon). The other experiments are about children in primary school in one or two specific grades (Dockrell & Connelly; Verhoeven & Van Elsäcker), or covering a wider age-range (Reilly & Posle; Soler Vilageliu et al.).

Studies on preschool children

The three experiments conducted among pre-literate children addressed different questions: mother-child interactions by **Aram and Levin**, phonological processes by Vernon and writing in Sandbank's study. Aram and Levin addressed the question of the nature of the interactions between the mother and the child and their impact on early literacy development before reading and writing formal learning. They assessed various mother's beliefs regarding their global pedagogical beliefs and their specific estimation of the performance of their child in literacy. They also recorded through video the nature of the interactions between the mother and her child during a short writing task of four words. They analysed various components such as the degree of guidance, or the demand of precision. They notably observed with hierarchical

regression that mothers' task mediation contributed an additional variance beyond the beliefs to child's literacy measures. **Vernon** contributed to this book with two experiments aiming to better understand the role of the syllable, more precisely its structure, in a phonological awareness task with 94 kindergartners (Study 1) and in a writing task with 140 children at the beginning of primary school (Study 2). The authors coded the different types of responses by qualifying the oral segmentation errors and spelling mistakes, and looked at how they correlated to the type of syllable processed. Their results suggested that the nature of the syllabic structure influenced both phonological and writing outcomes for Spanish-speaking children. The experiment conducted by **Sandbank** involves 24 preschool children aged between 5;5 and 6;9 years old. The task consisted in writing down in Hebrew commands for a board game during three different sessions. The children were working in small groups, and they were encouraged to interact by sharing information in order to help each other. Children wrote three sentences on cards, which would be then used to play the game. This highlighted the communicative goal of writing. The authors analysed the quality of children's sentences by looking at each word individually on several aspects like the accuracy of the phonological segments and the alphabetic principle. Moreover, the authors observed the evolution of each child across the three writing sessions showing diverse trajectories (advances, fluctuations and regressions). Finally, they demonstrated that interacting with each other led to a better writing level than individual writing.

Studies on primary school children

Dockrell and Connelly investigated the interactions between oral and written language in English at two developmental times (Grade 3 and 5). They aimed to better understand the relationship between underlying language skills through an experimental design targeting the sentence level. They compared oral and written sentence generation skills (i.e., produce as many sentences as possible containing two fixed words) to grasp the idea generation processes. They analysed the correlations between the oral or the written sentence generation tasks with other oral and written skills, showing the relationship and the specificity of the subcomponents of idea generation processes. Finally, whereas all the studies mentioned above involved monolingual children only, **Verhoeven and Van Elsäcker** compared monolingual and bilingual children's performance in literacy and the impact of several environmental variables on reading skills. They conducted a regression analysis, with the use of a backward method, in order to determine the influence of school predictors and home environment variables on literacy.

Cross-sectional and longitudinal studies

To study the development of skills linked to written language, authors used either a longitudinal design (Soler Vilageliu et al.), or a cross sectional design (Reilly & Posle). **Soler Vilageliu et al.** contributed to this book with a longitudinal study focused on the

motor side of writing. The authors determined the impact of the handwriting skills in Grade 1 on different abilities in Grade 5 (reading comprehension and spelling). For the first phase in Grade 1, children had to copy a list of words. Their handwriting execution was recorded with a digitiser, allowing the collection of information about several dynamic aspects of writing (e.g., writing time, trajectory, velocity changes). The tasks administered four years later for the second phase were standardised tests for the evaluation of writing skills (at the word, sentence and text levels) and reading comprehension. The authors used a cluster procedure to group the “low skilled handwriters” and the “high skilled handwriters” based on the data collected in Grade 1. They then determined, through the comparison of both cluster participants, how these graphomotor outcomes could predict later achievement in literacy. Their results revealed interesting links between early handwriting skills and later orthographic abilities and reading comprehension, with the “high skilled handwriters” performing better in several literacy abilities. In **Reilly and Posle’s** experiment, children were aged between 6;5 and 8;11 in the “Young Group” and 9;0 to 13;6 years old in the “Older group”. Reilly and Posle focused on comparing oral and written skills by investigating the links between the standardised scores in various language measures (tests assessing phonology, vocabulary, morphology and syntax) and written and spoken narratives. That last task consisted in writing and telling about a time someone had made him/her mad or sad. The scoring was based on different elements: the types of language structure (errors in morphology and syntactic depth) and linguistic productivity (number of semantic propositions, narrative structure and story components) were evaluated. The authors used a correlational method to determine how performances in isolated language structure and productions in a naturalistic context are linked. Based on the cross-sectional design, they adopted a developmental perspective to capture the changes over time.

1.2 Part 2: Later literacy development

The second part of the book is composed of nine chapters on the topic of later literacy development. In this part, the reader can also find several linguistic contexts, with three studies being conducted among Spanish speaking people (Aparici, Rosado & Perera; Bel & Albert; Salas, Llauro, Castillo, Taulé & Marti), one in Italian (Arfé & Pizzocaro) and in French (Ailhaud, Chenu & Jisa) and a study conducted in both English and Hebrew (Berman). Hebrew is also represented with two chapters (Nir & Katzenberger; Ravid, Shalom, Dattner, Katzenberger & Sha’shoua). All chapters addressed questions around later writing development at different levels. While one experiment used the sentence level as angle of study, the majority of authors focused on the text level. Finally, one study tackled the issue of writing assessment in educational contexts.

Sentence level

Arfé and Pizzocaro asked children to generate sentences in oral and written modalities, as well as to achieve a sentence reformulation task. Their aim was to evaluate whether oral and written sentence generation tasks may be sufficiently sensitive to detect developmental and individual differences in written expression. In a first study with children from Grade 2 to Grade 5, they demonstrated that the written sentence generation task was the most sensitive to developmental changes for all years. In a second study, the authors revealed through logistic regression that the same written sentence generation task was the most efficient to discriminate between writers with and without problems in written expression. Notably, this study involved both children with typical development and children with writing deficits and addressed a question at the sentence level.

Discourse and text levels

The other authors focused on the production of narrative and expository texts, which are semi-spontaneous tasks. This kind of task is seen as a naturalistic context for experiments, since it gives a lot of freedom to the participants regarding the content of their productions. Even if the tasks are quite similar, authors did not look at the same aspects of the participants' productions.

The two studies conducted in Hebrew by Nir and Katzenberger and Ravid et al. originated from the same database (i.e., The Israeli Writing Standards Project). The individuals who participated in this project were required to write personal-experience narratives and an expository text on a given topic. **Nir and Katzenberger** adopted a cross-sectional perspective by comparing four age groups (Grade 4, Grade 7, Grade 11 and adults). They analysed the way people constructed their written texts. The authors quantified the number of clauses according to three categories: descriptive, generalised proposition and interpretive. To shed light on how writing develops, the authors examined their data by looking at the distributions of the types of clauses at different ages. **Ravid et al.** only focused on children in Grade 7, with a special interest for the influence of their socioeconomic status (SES). They investigated how SES can be linked to the content material in the texts. They conducted ANOVAS as well as a dyadic analysis to compare the "high SES" group to the "low SES" group.

Several authors focused on comparing oral and written modalities at the discourse level. **Aparici et al.** presented a study on later literacy development focused on the development of relative clauses production among 9, 12, 17 year-old students and adults. They analysed quantitatively, the number of relative clauses in oral and written text productions, and qualitatively, the functions of the relative clauses from a discourse point of view. Students had to produce written and oral texts of two types: narrative and expository. They showed quantitative and qualitative developmental changes from a structural and discourse point of view. They notably confirmed that the syntax of expository texts is more complex than syntax of narrative texts (i.e., higher frequency of relative clauses in expository texts), as well as an increase in the

number of relative clauses in written modality compared to oral modality for high school students and adults. In the **Berman's** chapter, the author reported the analysis of the quality of discourse styles, in line with the concept of linguistic literacy and the development of linguistic repertoire of language. He analysed a database of 160 narratives produced in both spoken and written modalities by English and Hebrew students from four schooling levels. The chapter focused on differences between the speech and the writing narratives such as the overall text length, the frequency of hesitation markers or repetitions, and the clause-combining with some illustrations from the participants' texts. **Bel and Albert** also tested four age groups (9-10; 12-13; 15-16 and university students) and put a special emphasis on a precise aspect of Spanish language: the use of the null pronoun during speech compared to writing production. The authors considered the distribution of the null pronoun within the narratives and analysed their distribution. They used repeated measured ANOVAs to identify differences between groups and to investigate the impact of the modality (oral vs. written). In the study of **Ailhaud et al.**, the authors examined the planning processes through two chronometric measures, pause length and writing rate, during text production with children and adolescents from 9 to 16 years. Students had to produce narrative and expository texts either in written modality first, followed by oral modality, or in oral modality followed by written modality. The authors evaluated whether the order of presentation may impact, as well as the developmental stage, the type of text production and the moment of planning related to the type of syntactic units (clause, propositional, etc.). The results revealed that pause length was shorter when students produced the oral text before the written text (for seventh graders).

Text assessment

Finally, **Salas et al.** focused on the question of text assessment. They evaluated written text productions of Spanish children aged 9, 12, 16 and adults. Independent raters were in charge of scoring the texts based on several holistic criteria. The authors aimed at determining to what extent the linguistic markers contained in the texts (e.g., lexical density, number of adjectives, average content-word length) were related to the variation of the scores given by the judges. Data was analysed with correlations and multiple regression analyses.

2. Discussion

The first chapter, by R. M. Joshi, highlights Liliana Tolchinsky's contribution to research and how she was a pioneer in the field of writing. The author points out three areas of expertise in which Liliana Tolchinsky particularly contributed: 1) writing should be considered a separate field on its own, and not be reduced to oral language on a sheet of paper; 2) preschool children have a natural understanding of writing; 3) writing development should be studied with consideration to the language at stake and the characteristics of its orthography. For this book review, we decided to discuss

the chapters in the perspective of Liliana Tolchinsky's three major contributions to the field of writing.

Writing as a specific research field

Historically, writing has long been seen as "speech written down", but many researchers do not agree upon this view. Several chapters in this book addressed this question, by investigating the relationships between oral and written languages, or by highlighting the specifics of written language.

Soler Vilageliu et al. focused on handwriting development, which is a new and challenging production skill that every child has to master. The authors reminded us that, within the field of writing research, this side of writing has often been put aside, while spelling and transcription skills are more documented. However, this complex ability is part of writing development. This emphasizes the idea that writing cannot be viewed as "speech on paper", since it involves graphomotor skills that are specific to writing, and are required for handwriting execution.

Another aspect specific to the writing modality is its assessment. This issue seems to catch many researchers' attention from the writing domain, willing to improve the way written production is evaluated, particularly in school context. In that respect, the two studies by **Ravid et al.** and **Nir and Katzenberger** used data taken from the "Israeli Writing Standards Project" which is a project aiming at improving the way texts are assessed in Hebrew, by providing standards to the teachers. With their chapter, **Salas et al.** also related to this topic. They focused on text quality assessment, by intending to find out more about the links between linguistic features and holistic quality scores given by four expert judges. By conducting their experiment with a cross-sectional design, they shed light on developmental stages relevant for teachers when it comes to assessing their students' text quality.

Many authors within this volume aimed at studying the links between the two language modalities, oral vs. written, and more specifically on the production processes. In doing so they highlighted the specificities of written production compared to speech. **Reilly and Posle** analysed different aspects of spoken and written languages, through the use of standardised tests and written and spoken narratives. They adopted a longitudinal perspective, which provided a better understanding of the relationship changes across primary school years. In their study, **Dockrell and Connelly** investigated how oral and written sentence generation are linked, and demonstrated that oral generation played a role to support written sentence production among primary school children, and that this relationship evolved over time. In their chapter, **Bel and Albert** also focused on comparing oral and written language, with the will to better understand language development in Spanish specifically regarding the use of the null pronoun. Their results revealed that modality had a significant influence, with more ambiguity found in spoken Spanish than in the written form. In the same vein, **Berman** compared the spoken and written narratives on various components, such as repetitions and text length. **Ailhaud et al.**

evaluated whether the order of presentation of the modality (oral modality first or written modality first) may impact on several levels text production, and whether an oral preparation could positively influence written production of narratives. In the chapter by **Aparici, Rosado and Perera**, students had to produce written and oral texts, narrative and expository. They showed quantitative and qualitative developmental changes from structural and discursive points of view. They revealed an increase of the number of relative clauses in written modality compared to oral modality for high school students and adults

While the connections between reading and writing are quite well documented within the literature, the questions regarding the nature and the development of the links between oral and written language have been addressed less often. The authors mentioned above contributed to enriching the work connecting speaking and writing, more specifically at the discourse level. In sum, those studies demonstrated the richness of the written modality at different language levels such as the diversity of the sentences produced, the use of specific pronouns, the variety of relative clauses or kinds of clauses. As a whole, this book provides an overall picture of the concept of linguistic literacy introduced by Liliana Tolchinsky, defined as “gaining control over a larger and more flexible linguistic repertoire and simultaneously being more aware of one’s own spoken and written language systems” (Ravid & Tolchinsky, 2002, p. 420).

Writing development in pre-schoolers

One of Liliana Tolchinsky’s major contributions to the field of research was to defend the idea that young children already have some idea about writing, even before they are formally taught in school. Overall, Liliana Tolchinsky was interested in understanding the processes involved in early written language acquisition, especially on writing. Three chapters in Part I on early literacy addressed the case of pre-literate children.

In their study, **Aram and Levin** investigated the role played by mother-child interactions on early literacy development. **Vernon** proposed two experiments that focused on the phonological processes, which are literacy prerequisite skills. **Sandbank** contributed to the book with a chapter in which she compared preschool children’s production written in a peer interaction context vs. individual writing. By working together in small groups, children enriched each other’s knowledge about writing, which led to a more advanced level of writing.

To conclude, these results emphasised the idea that pre-literate children already have knowledge about writing. In line with previous work done by Liliana Tolchinsky, the focus here was put on writing skills, in particular on a semantically-based knowledge in the sense that authors attached importance to the meaning of the act of writing for young children. This perspective is a pleasant and relevant contribution to the literature.

Writing in a cross-orthographic perspective

Finally, several chapters inside this book related to the development of spelling in cross-orthographic perspectives. Indeed, another major contribution from Liliana Tolchinsky was to highlight the fact that monolingual children and bilingual children do not show the same patterns of development, and that this development varies according to the characteristics of the orthography at stake. Therefore, it is not surprising to find in this book a lot of studies conducted in linguistic contexts that are not represented as much as English within the literature.

In the study conducted by **Salas et al.**, the characteristics of the orthography at stake were taken into consideration. The authors highlighted the fact that most studies conducted on text composition processes took place in an English-speaking context, which is a very opaque orthography. However, text quality cannot be evaluated the same way in different orthographies, since it has been demonstrated that the level of language consistency can have an impact on writing outcomes. Their experiment took place in the context of a very consistent orthography, i.e. Spanish, for which there is a need to investigate the text generation processes. Similarly, the chapters conducted by **Nir and Katzenberger** and **Ravid et al.** took place in a Hebrew-speaking context and also originated from the will to better understand their language. This provides the readers with a lot of information about a language, and its alphabet, that are not often at the centre of researchers' attention. **Arfé and Pizzocaro** also focused on the specificity of Italian language, explaining that it is based on complex grammar and morphology required to retrieve morpho-syntactic structures and generate sentences. **Bel and Albert** focused on a precise element of Spanish language, which can also be found in other Latin languages, that is the null pronoun. **Berman** grouped, within the same chapter, data collected in the US and in Israel, giving the opportunity to observe language development in a discursive context in both English and Hebrew. All those authors contributed to enriching our knowledge about languages and their particularities.

Regarding bilingualism, **Verhoeven and Van Elsäcker** compared monolingual individuals with bilingual participants on different language abilities. Their findings consolidate the idea that bilingual children do not follow the same developmental paths during writing acquisition.

In conclusion, those chapters together contribute to a better understanding, in a cross-linguistic perspective, of language development and emphasize on the relevance to consider the orthographic characteristics when addressing questions about language development. In an interesting way, this book highlights various linguistic levels for the comparison between languages. Indeed, the differences between languages could be investigated at the level of transcription of phonemes to graphemes like it has frequently been reported. Interestingly, this book focuses on differences between languages regarding the complexity of grammar and morphology, which could also explain differences in the development of text production.

3. Conclusion

Written and Spoken Language Development across the Lifespan is a multidisciplinary book that delivers extensive research on the relationships between speaking and writing, in line with Liliana Tolchinsky's research interests. It provides insights on topics from early to late language development thanks to cross-sectional and longitudinal experiments. The reader will find information about language development in various contexts, such as typical vs. atypical development, multilingual environments, consistent vs. opaque orthographies and different types of alphabet (Latin vs. Hebrew). Examining the links between oral and written language is challenging since it requires the investigation of a high number of linguistic features. By focusing on various levels of language, such as semantics, syntax, morphology as well as spelling and handwriting execution, and with the use of a diversity of methods of analysis, the researchers who contributed to this volume offer an utter overview of language development.

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