





*International Journal of Learning, Teaching and Educational Research*  
Vol. 22, No. 8, pp. 253-271, August 2023  
<https://doi.org/10.26803/ijlter.22.8.14>  
Received Jun 30, 2023; Revised Aug 17, 2023; Accepted Aug 20, 2023

## The Role of Narrative Ability on Emergent Literacy Skills and Early Word Reading of Early Childhood Students

Nur Aini Puspitasari\*, Vismaia S. Damaianti, Syihabuddin  
and Sumiyadi

Department of Indonesian language education,  
Universitas Pendidikan Indonesia, Bandung, Indonesia

**Abstract.** Narrative ability is one of the abilities included in emergent literacy and plays a very important role in the development of students' early reading skills. However, research examining the relationship between narrative skills, emergent literacy skills and word reading skills is still limited. Through this research, the researcher investigates the role of narrative ability on emergent literacy ability and reading ability. Besides that, the study investigates the predictive relationship between students' narrative ability, emergent literacy ability, and early word reading ability. The method used in this study was factorial design analysis with several types of data analysis, namely descriptive, correlation, and regression to see the role and relationship of narrative ability, emergent literacy ability, and students' initial word reading ability. Participants in this study were early childhood students, totaling 250 students with an age range of 2-5 years. The research findings show that narrative ability has a significant positive correlation with all aspects of emergent literacy measures. Narrative ability is able to predict the ability to read words in the univariate model. Storybook retelling instructions result in a story that is longer than the original story. This change in story length can have an impact on the use of complex language and decontextualization such as vocabulary development, development of linguistics units, understanding of characters in stories, and story organization. Furthermore, this study also shows that the relationship between students' narrative ability and word reading ability can be mediated by emergent literacy skills, including syntactic abilities, knowledge of letters, phonological abilities, pronunciation of letter sounds, and print conventions. Although the relationship between narrative ability and students' initial reading ability is not direct, this narrative ability makes a significant contribution because narrative ability has a significant impact on emergency literacy skills which, in turn, supports the development of students' reading skills. This research implies that parents or teachers need to consider various alternatives in

---

\*Corresponding author: Nur Aini Puspitasari; [nainipuspitasari@upi.edu](mailto:nainipuspitasari@upi.edu)

developing students' reading skills by optimizing narrative skills and other emergent literacy skills so that students are better prepared when they enter school age.

**Keywords:** narrative ability; emergent literacy; early word reading ability; early childhood students

## 1. Introduction

The different stages of child development are amazing because, in every phase of development, children not only grow physically, but also develop psychologically to intelligence. Early childhood education is education that aims to prepare children to enter school age. Early age is the right time to get an education (Reese et al., 2023; Walgermo et al., 2018). At this time, children are experiencing a process of extraordinary growth and development. Early age is a golden period for student development and is a period when children have a lot of excellent potential to be developed (Ong'ayi et al., 2020; Westerveld et al., 2020). Teachers and parents must collaborate in optimizing children's potential, especially in strengthening the basic foundation for children in acquiring other knowledge (Altun et al., 2022; Dussling, 2018). Literacy skills form the basis for early childhood students to access new knowledge. These literacy skills include reading skills and other emergent literacy skills to support student development (Hadianto et al., 2022; Thomas et al., 2020). Emergent literacy skills are basic skills that can be used to develop conventional reading skills. Some of the substantial skills included in emergent literacy are letter acquisition, phonological skill, and vocabulary comprehension, which are important contributions to early word reading skills (Hung & Loh, 2021; Kim et al., 2021). In addition, several theories also incorporate narrative abilities into emergent literacy and play a very important role in the development of early reading skills in early childhood students. Narrative ability is the ability to tell the sequence of events orally and coherently (Maureen et al., 2020; Nevo & Vaknin-Nusbaum, 2018). This narrative ability includes elements of macrostructure and microstructure. Macro elements are the ability to organize ideas according to the structure of the story, while micro structures are special features that support students' narrative abilities, such as the use of language, grammar, and sentence complexity (Majorano et al., 2021; Weadman et al., 2022).

Based on the relationship between narrative ability, spoken language, and print media, students' narrative ability is a very important component of emergent literacy that contributes to early childhood learning to read (Matsumoto & Tsuneda, 2019; Ong'ayi et al., 2020). Early reading is reading taught programmatically to preschoolers. Beginning reading can be done by presenting objects and knowledge through imitation, symbolic games, drawing, mental images and spoken language; this is called the pre-operational stage and occurs at the age of 2-5 years (Timperley et al., 2022; Wolff & Gustafsson, 2022). Reading is defined as a process carried out and used by readers to get the message the writer wants to convey through the medium of written language words. Reading activity consists of two parts, namely reading as a process and reading as a product (Thomas et al., 2020; Uchikoshi et al., 2018). Reading activity is a mental activity to understand what is said by other parties through

writing. Beginning reading can be interpreted as an early stage carried out by children to acquire skills in reading, namely the ability or skill to recognize writing as a symbol or symbol of language, so that children can voice the writing (Hadianto et al., 2021a; Virinkoski et al., 2018). Beginning reading for children is the initial stage of them learning to recognize letters or sound symbols and sound them, as a basis for children in learning the next reading. Reading is a complex process involving various cognitive functions, namely attention, concentration, the ability to make associations with information obtained through various modalities, the ability to perform rapid decoding, verbal comprehension and general intelligence (Incognito & Pinto, 2021; Thomas et al., 2020). Several previous studies have confirmed the existence of a relationship between skills, for example, the relationship between narrative ability and listening ability, expressive and receptive vocabulary mastery, grammar ability and reading comprehension (Anderson et al., 2019; Decker et al., 2018). However, scant previous research has revealed the relationship between narrative ability and emergent literacy in early childhood and early reading skills. Therefore, this study aims to investigate the relationship between narrative ability and emergent literacy skills and examine the predictive relationship between narrative ability and early word reading after considering other contributions to emergent literacy.

## **2. Literature Review**

### **2.1 Narrative skills and emergent literacy**

Since narrative ability has a correlation with emergent literacy, the researcher presents a theoretical framework for the relationship between narrative ability and emergent literacy. Emergent literacy skills are always related to initial language skills and early literacy experiences (Maureen et al., 2020; Olaussen, 2022). Students' narrative abilities are strongly supported by their verbal interactions with adults. Through this interaction, students' language skills and early reading skills develop. The activity of reading books together in the family will make a huge contribution to students' narrative abilities (Pinto et al., 2017; Weadman et al., 2022). In addition, through this reading activity, early childhood students have the opportunity to learn print conventions, letter recognition, and letter pronunciation, vocabulary, and other aspects of language skills. Narrative skills also provide opportunities for students to gain knowledge about story structure, so that students' knowledge of story organization improves (Reese et al., 2023; Walgermo et al., 2018). Previous research has focused little on the correlation between narrative ability and emergent literacy. However, there have been several previous studies that raised emergent literacy with other language skills, including a positive relationship between narrative abilities of early students and writing skills, knowledge of letters, phonological abilities, and other print conversion skills (Kahveci & Güneşli, 2020; Snow et al., 2020; Thomas et al., 2019). Furthermore, other studies also prove that there is a positive relationship between narrative ability and mastery of letters and print conventions. Other studies also confirm that there is a positive correlation between narrative ability in preschool students and phonological awareness and letter knowledge (Hadianto et al., 2021b; Snow et al., 2020; Uchikoshi et al., 2018).

The findings of this research are supported by the theory that narrative ability requires structural, processing, and phonological awareness skills (Bennett et al., 2023; Thomas et al., 2019). However, other studies have revealed that there is only a slight correlation between narrative ability and phonological awareness, letter knowledge, sound pronunciation, and print-writing ability. Broadly speaking, students' narrative abilities are more closely related to linguistic abilities. This is supported by research which reveals that storytelling skills are more supported by oral language skills than students' reading abilities (Ong'ayi et al., 2020; Zanchi et al., 2020). Other studies also reveal that narrative ability is proven to be a mediator between oral language skills and emergent literacy in early childhood students in America and Africa (Altun et al., 2022; Torr, 2019). The majority of previous studies examining the relationship between emergent literacy skills did not, however, involve procedures for improving narrative abilities because it takes time to code students' narratives (Bean et al., 2020; Hung & Loh, 2021; Kim et al., 2021).

## **2.2 Narrative skills and early reading skills**

Narrative ability is an important element in emergent literacy because it is one of the elements that contributes to the development of reading skills (Majorano et al., 2022; Maureen et al., 2020). Several previous studies that examined the relationship between narrative ability and majority reading ability only focused on the relationship between narrative and reading comprehension ability (Neumann & Neumann, 2019; Nevo & Vaknin-Nusbaum, 2018). Nonetheless, narration ability is considered by some experts to be able to provide predictions on the ability to read early words, such as the ability to identify words and ability to decode. Such a correlation is corroborated by a literature review and empirical research which confirms a correlation between spoken language ability and word reading ability (Olaussen, 2022; Pinto et al., 2017). One of the language skills that contribute to reading ability is, for example, vocabulary mastery, which not only contributes to the level of understanding but also to the ability to connect or organize ideas in every word one reads. Previous studies confirmed that vocabulary mastery ability has a positive correlation with reading comprehension, listening comprehension, and word reading (Majorano et al., 2021; Weadman et al., 2022). Oral language skills are complex language skills, one of which is narrative ability, which can facilitate the development of students' vocabulary mastery if done intensively and support the development of other emergent literacy skills, for example, phonological abilities (Krijnen et al., 2020; Wolff & Gustafsson, 2022). Among the several emergent literacy skills that contribute to spoken language skills and narrative skills are knowledge of letters, print concepts, and phonological skills (Snow et al., 2020; Timperley et al., 2022). A similar relationship was also found in the relationship between emergent literacy skills and spoken language skills, and knowledge of printed texts.

The relationship between narrative ability and early reading ability is also strengthened by several other studies which state that the length and quality of oral narratives of early students at the age of 4-5 years can predict reading ability and ability to understand texts at the age of 8-9 years (Kahveci & Güneşli, 2020; Uchikoshi et al., 2018). The relationship between narrative ability and word-

reading ability can also be used as a criterion for measuring the quality of narrative ability of early-age students at the age of 6 years and being able to identify a correlation simultaneously between decoding ability and ability to read orally for the next two years of the student's age (Bennett et al., 2023; Thomas et al., 2020). This narrative ability does have a positive relationship with decoding ability and oral reading ability in the next 1-2 years, but it is unable to predict its ability after two years. Other studies prove that narrative ability can predict oral reading ability, vocabulary mastery, and decoding ability. Narrative ability is also able to predict reading ability, vocabulary identification ability, decoding, and reading comprehension ability at the age of preschool to elementary school (Dolean et al., 2021; Gandolfi et al., 2021; Incognito & Pinto, 2021). Elements of the structure of students' narrative abilities are able to provide predictions on word identification and reading comprehension abilities; microstructure elements are able to predict students' decoding abilities (Walgermo et al., 2018; Weadman et al., 2022).

Providing opportunities for young students to develop narrative skills through reading together and learning grammar explicitly through stories and vocabulary can improve students' early word reading skills. The relationship between narrative ability and word reading ability has been found in various languages, such as English, Spanish, Korean, Japanese and so on (Kim et al., 2021; Majorano et al., 2022; Maureen et al., 2020). Some of these studies support narrative skills and early reading skills; however, there are also several studies that contradict these findings, for example, studies that examined narrative abilities in early childhood students as assessed by macrostructure did not show any predictions of reading, decoding, and word comprehension abilities controlling emergent literacy skills (Decker et al., 2018; Hettiarachchi, 2022). In addition, narrative ability is also not positively correlated with print-writing ability and phonological ability. In addition, other studies have also confirmed that there is no significant correlation between narrative ability and early grade reading ability (Altun et al., 2022; Matsumoto & Tsusneda, 2019). Moreover, the correlation between narrative ability and decoding ability also does not show a consistent relationship. Furthermore, several other studies examining the relationship between emergent literacy skills and reading skills did not involve narrative abilities in predicting early-age students' early reading abilities (Ong'ayi et al., 2020; Soto-Calvo et al., 2020). In addition, narrative ability was also found to be not involved in discrete predictors in the meta-analysis research conducted by the National Early Literacy Panel. Therefore, there is still considerable work that needs to be investigated regarding the contribution of narrative ability to early word reading skills in early childhood students.

### **2.3 Contribution and research objectives**

From the theory described earlier, it can be seen that narrative ability is positively correlated with emergent literacy skills and early word reading skills in early-age students. Nonetheless, there are still a number of studies that have not involved narrative ability as a variable included in emergent literacy and involve relatively small samples so that the research results cannot be generalized. In addition, previous studies have mostly only revealed the relationship between emergent literacy skills and word reading skills measured

using only size criterion, which represent only a part of the construct, for example, only involving macro structures (Anderson et al., 2019; Ciampa & Gallagher, 2018). Several other studies have only examined the correlation of narrative ability with early word reading skills without considering other emergent literacy abilities (Decker et al., 2018; Hettiarachchi, 2022). Thus, the majority of previous studies have not investigated the contribution of narrative skills directly and indirectly to early word reading skills and their relationship with other emergent literacy skills. In the current study, the researcher formulated several research objectives, 1) investigate the co-relationship between narrative ability and other emergent literacy abilities, 2) investigate the predictive relationship between narrative ability and early word reading ability in early age students by considering the univariate contribution of emergent literacy, 3) examine the relationship between narrative ability and word reading ability through other emergent literacy skills. This research was conducted by taking into account several aspects, including involving a large enough sample of early childhood students so as to make generalizations, involving criteria for measuring psychometric narrative ability which represented macro and micro structural aspects, using emergent literacy action procedures as well as creating an emergent literacy framework. This study not only examines the correlation between narrative ability and emergent literacy skills but also investigates the direct and indirect contributions of narrative ability to early word reading skills.

### **3. Methodology**

#### **3.1 Participants**

This study uses a factorial design analysis research method to investigate the role, and contribution of narrative ability to emergent literacy skills and early word reading skills in early childhood students (Incognito & Pinto, 2021; Snow et al., 2020). The participants in this study were 250 early childhood students from 15 schools in the Jakarta area, Indonesia. The gender proportion of students in this study was 45% male and 55% female. The ages of the students who participated were in the range of 2-5 years ( $M = 3.30$  years,  $SD = 0.70$ ). Parents of participants filled out the consent form in participating in the study. The selection of the sample was carried out with the criteria that students already had a fairly good ability to tell stories orally and had no speech disorders. The proportion of students who took part in the study was dominated by families originally from Jakarta (70%) and the rest were students from families originating from West Java province (30%). The education levels of the parents of the students involved in the research were undergraduate (30%), master's (20%), doctoral (10%), and vocational and high school levels (40%). The average income of parents of students involved in the research was \$30,000 (40%), \$31,000-\$80,000 (30%), and over \$80,000 (30%). Early childhood students who were involved in the research were spread across several urban areas (30%), suburbs (50%), and rural areas (20%). These early age students are spread out in kindergartens located in three regions, namely urban, suburban, and rural areas. These demographic factors are considered so that the student sample represents the student population and the research results can be generalized.

### **3.2 Research Instrument and Procedures**

The research began by filling out the willingness form to participate in this research. Next, an assessment of several emergent literacy abilities was carried out according to the emergent literacy theory framework. Assessments were carried out by instructors and research assistants individually. Narrative ability assessment was carried out individually and using storybooks that had been provided by the researcher. Assessment of students' narrative abilities was also not only carried out by teachers but also assisted by parents of students by being given instructions beforehand. Finally, the assessment of the ability to read early words was carried out using books that were often used at the school. An assessment of these abilities was carried out to see the contribution and correlation between narrative ability, emergent literacy skills, and early word reading skills in early childhood students.

### **3.3 Narrative ability**

Narrative ability assessment was carried out using the narrative assessment procedure (NAP) adopted from Foster (2018). This assessment of narrative ability was carried out by means of a strict psychometric assessment, with a procedure similar to that of narrative assessment ability in general. This NAP assessment was carried out by giving instructions to retell stories that had been read by students. The NAP assessment was carried out by coding the aspects of both the macro structure (for example, the use of phrases, terms, sentences, verbs, and other types of words) and the narrative micro structure which includes opening style, ability to identify character traits, ability to identify sub-goals and resolution of storybooks. The items in the NAP assessment are built based on a comprehensive literature review regarding the development of narrative abilities and have gone through a rigorous validation process using factor analysis and Rasch analysis (Bowles, 2018). Rasch analysis is a validation model using response items that emphasize validation and tight interval measurements. Narrative ability was assessed by retelling, which was recorded using audio and coded for analysis of narrative ability. The level of agreement between raters was carried out by using a multiple score of 10% to obtain a score of 0.87. In addition, the result of the inter-rater measurement reliability analysis was 0.81, which was assessed using Rasch analysis.

### **3.4 Syntax or language skills**

Receptive, expressive, semantic, and syntactic language skills were assessed using tests adopted from the Clinical Evaluation of Language Fundamentals Preschool (Secord & Semel, 2004). This test consists of several subtests. First, the expressive vocabulary subtest which is used to assess students' ability to name nouns, verbs, or other expressive vocabulary. Second, the sentence structure subtest is used to assess students' ability to understand simple and complex sentences. Third, the word structure subtest is used to assess students' ability to make sentences using combinations of nouns, verbs, prepositions, adjectives, pronouns, etc. This test shows internal consistency with scores in the range of 0.83-0.85 for each subtest, which means that this test meets the criteria of validity and reliability so that it can be relied upon to assess students' language skills at an early age.

### **3.5 Print convention capability**

Students' knowledge of print conventions was assessed using an assessment adopted from the Preschool Word and Print Awareness assessment (Skibbe, 2006). This assessment tasks students with demonstrating knowledge of print concepts (e.g. image versus print, or direct print instructions) integrated into reading activities with parents or tutors. Instrument reliability was calculated using Item Response Theory analysis with a fairly high score of 0.80. According to the assessment procedure, the score obtained was converted to an IRT-based score with an average value of 100 and a standard deviation of 16.

### **3.6 Letter knowledge**

Students' knowledge of use of letters was assessed using Quick Letter Name Knowledge (Justice, Bowles, & Skibbe, 2006). This assessment is in the form of four parallel tests containing 10 letters each which have the same level of difficulty based on the Item Response Theory analysis. A set of tests is chosen at random when students will be given a test wherein they are instructed to analyze capital and lowercase letters. The reliability level of this test based on Item Response Theory was in the range of 0.90-0.93. The scores obtained were converted into scaled scores with Item Response Theory with an average score of 22 and a standard deviation of 3.

### **3.7 Phonological ability**

Students' phonological abilities were assessed using the phonological awareness subtest from the Clinical Evaluation of Language Fundamentals Preschool (Secord & Semel, 2004). This subtest requires students to determine rhyme, construct compound words and syllables, detail sentences and syllables. Based on the results of the analysis, internal consistency with a score range of 0.89-0.90 in students aged 4-6 was analyzed from the raw scores.

### **3.8 Knowledge of pronunciation of letters**

Students' knowledge of letter sounds was assessed using various forms of short letter sounds adopted from letter sound test (Bowles & Anthony, 2016). Each test contains seven letters displayed in capital and lowercase, then students are asked to pronounce the sound of the letters. The difficulty level of the test was analyzed using Item Response Theory. A set of tests was chosen randomly and given to students. The level of reliability based on the Item Response Theory analysis was in the range of scores 0.90-0.92 on each test. The scores obtained were converted into scores based on Item Response Theory with an average score of 20 and a standard deviation of 3.

### **3.9 Early word reading ability**

Students' initial word reading ability was assessed using the word identification subtest and the Word Attack subtest. These two subtests were adopted from the Woodcock Tests of Achievement (Woodcock, 2007). The word identification subtest is used to assess students' ability to identify words that begin with identifying letters first and then being instructed to read more difficult words. The Word Attack subtest was used to assess decoding abilities whereby students were asked to read increasingly complex pseudo-words. The level of reliability of this assessment was measured using a split-half and a score range of 0.94-0.99



was obtained from the conversion of the raw score into a W score based on the item response theory.

#### 4. Results

To answer the first research objective regarding the relationship between narrative ability and emergent literacy ability, the results of the correlation analysis between narrative ability and emergent literacy ability are presented in Table 1. Based on the results of the analysis, a significant correlation was found between narrative ability and other emergent literacy skills with a range of values  $r_s$  0.205-0.399. The correlation between abilities in emergent literacy is in the range .398-0.860. Based on the results of the correlation analysis involving exploratory factor analysis, it was found that the correlation between abilities involving narrative abilities was lower by including all abilities into one factor, where each eigenvalue, namely the first eigenvalue = 4.623, the second eigenvalue = 0.962, and the eigenvalue third = 0.733. The correlation value for loading the narrative ability factor is 0.389 which is smaller than the loading value for other emergent literacy skills with a correlation value of 0.713-0.875. Furthermore, the second research objective was answered with correlation data on narrative ability and early reading ability. The correlation data were analyzed using a univariate correlation between the two abilities (narrative ability and early reading ability), which are presented in Table 1. From the results of the analysis, it was found that early reading sub skills, namely word identification and decoding skills, had a positive and significant correlation with narrative ability with values of  $r_s$  0.254 and 0.290, respectively.

Furthermore, hierarchical regression analysis was performed to investigate the contribution of narrative ability to early reading ability after analyzing other emergent literacy skills. This hierarchical regression analysis was carried out separately in the analysis of word identification ability and decoding ability. The researcher included all non-narrative emergent literacy abilities in the first model analysis, namely syntactical skills, knowledge of letters, phonology, ability to pronounce letter sounds, and print conventions. Furthermore, in the second step of the analysis model, the researcher added narrative abilities. The results of the analysis of the first model are presented in Table 2. The contribution of non-narrative emergent literacy skills is in the range of 47.6-50.5%, which comes from early reading ability. If narrative skills are not related to word identification abilities or decoding abilities, the resulting contribution is only small, namely 0.5-0.7% of the variance after involving non-narrative emergent literacy skills. So, this narrative ability has a very close relationship with students' language skills and expressive vocabulary skills in early-age students with a value of  $r = 0.457$ . Narrative ability and other language skills that cause the relationship between narrative ability and early reading ability to be not strong. Therefore, the researcher conducted a post hoc test which did not involve other language abilities.

**Table 1. Correlation of narrative ability with emergent literacy and early word reading ability**

Size	1	2	3	4	5	6	7	8	9	10	M	SD
1. Narrative capabilities	-	.399	.305	.351	.305	.205	.340	.271	.254	.290	19.75	3.05
2. Language / syntax skills: Expressive word mastery		-	.640	.750	.560	.508	.552	.530	.482	.491	21.80	7.60
3. Language/syntactic skills: Use of Sentences			-	.681	.580	.492	.640	.450	.480	.513	15.89	4.50
4. Language/syntactic skills: Word Usage				-	.614	.551	.650	.520	.589	.523	15.50	4.89
5. Print conventions					-	.550	.572	.592	.570	.542	121.51	18.10
6. Use of letters						-	.489	.780	.690	.663	22.42	1.99
7. Phonological ability							-	.560	.510	.589	12.90	7.85
8. Pronunciation of letter sounds								-	.652	.657	21.40	1.92
9. Ability to read early words: Identify words									-	.862	413.40	47.31
10. Decoding ability										-	452.10	37.12

In the hierarchical regression analysis, the researcher involved the ability of printing conventions, knowledge of letters, sound pronunciation, and phonological abilities in the first analysis step and then in the second analysis step the narrative abilities were involved. The results of the analysis of the second model are presented in Table 3. The results of the analysis of this second model are similar to the hierarchical regression analysis with the result that narrative ability does not contribute to initial reading ability as well as when other language abilities are involved. As material for comparison of the amount of variance in narrative ability and other language skills, the researcher conducted a hierarchical regression analysis involving other skills, such as mold convention, letter recognition, phonological ability, and pronunciation of letter sounds in the first analysis model and analysis of syntactic abilities in the second analysis model; the second model is presented in Table 3. Based on the analysis of the second and third models, it was found that syntactic ability or language ability contributed 0.10% of the variance, which was quite significant non-statistically. Furthermore, the contribution of word identification ability is 1.15 % of the variance in decoding ability. The number of variants in the results of the analysis of the ability to read words in the second model analysis is not significant at 0.9 and 0.5%.

**Table 2. Results of hierarchical regression analysis of narrative ability to predict reading ability (analysis of the first model)**

Predictors	Word identification			Decoding		
	R <sup>2</sup>	ΔR <sup>2</sup>	β	R <sup>2</sup>	ΔR <sup>2</sup>	β
Analysis 1	.496***			.485***		
Language/syntactic skills						
Use of expressive vocabulary			.023			.010
Sentence use			.143			.175*
Use of word structures			-.050			.023
Printing convention			.188**			.152
Letter knowledge			.182*			.082
Phonological ability			.071			.030
Pronunciation of letter sounds			.412**			.489***
Analysis 2	.496***	.004		.489***	.006	
Narrative ability			.062			.085

**Table 3. Results of post hoc hierarchical regression analysis of narrative ability to predict initial word reading ability (analysis of the second and third models)**

Predictor	Word identification			Decoding		
	R <sup>2</sup>	ΔR <sup>2</sup>	β	R <sup>2</sup>	ΔR <sup>2</sup>	β
Model 2						
Analysis 1	.492***			.471***		
Print convention		.249***				.231***
Letter knowledge			.180*			.089
Phonological ability			.093			.088
Pronunciation of letter sounds			.312***			.391***
Analysis 2	.490***	.005		.480***	.009	
Narrative ability			.070			.097
Model 3						
Analysis 1	.512***			.472***		
Print convention		.268***				.221***
Letter knowledge		.160*				.070
Phonological ability		.098				.097
Pronunciation of letter sounds		.336***				.421***
Analysis 2	.514***	.010		.490***	.020*	
Language/syntactic skills:						
Use of expressive words		.020				.008
Use of sentence structure		.120				.162*
Use of word structures		-.050				.045

\*p\ .05; \*\* p\ .01; \*\*\*p\ .001

To answer the third research objective regarding the correlation between narrative ability and word reading ability through the intermediary of emergent literacy skills, multiple mediator analysis was carried out on word reading ability by placing narrative ability as an independent variable of interest and placing other emergent literacy skills as a mediator variable. The results of the correlation analysis of narrative ability and early word reading ability mediated by emergent literacy skills are presented in Table 4. From the analysis results, it was found that students' narrative ability had a significant direct effect on word identification ability and decoding ability. However, this effect turned indirect after the analysis was carried out by involving emergent literacy skills into the analysis model. In the second analysis, narrative ability and word identification ability do not contribute directly but are mediated by the ability to print conventions, the use of sentence structures, knowledge of letters, and the pronunciation of letter sounds. In addition, the correlation between narrative ability and decoding ability also has a significant indirect effect which is mediated by printing conventions, the use of sentence structures, and the pronunciation of letter sounds.

**Table 4. Direct and indirect correlation between narrative ability and initial word reading ability through students' emergent literacy skills**

Predictor	Word identification			Decoding		
	Estimate	SE	p	Estimate	SE	P
Total impact	5.960	1.553	<.001*	4.932	1.210	<.001*
Immediate impact						
Narrative ability	1.414	1.345	.380	1.452	0.930	.145
Expressive vocabulary	0.031	0.615	.970	0.082	0.490	.962
Sentence structure	1.562	0.884	.073	1.489	0.689	.034*
Word structure	- 0.570	0.940	.580	0.135	0.650	.852
Print convention	0.554	0.212	<.001*	0.289	0.160	.072
Letter knowledge	4.431	1.962	.030*	1.725	1.624	.290
Phonological ability	0.461	0.580	.570	0.082	0.470	.962
Pronunciation of letter sounds	7.365	2.240	.030*	7.314	1.762	<.001*
	Estimate	SE	95% CI	Estimate	SE	95% CI
Indirect impact						
Expressive vocabulary	0.031	0.842	[-1.582, 1.540]	- 0.971	0.542	[-1.340, 0.912]
Sentence structure	0.921	0.650	[0.020, 2.430]*	0.880	0.582	[0.080 1.860]*
Word structure	- 0.470	0.760	[- 1.989, 1.052]	0.097	0.556	[- 0.940, 1.443]
Print convention	1.320	0.570	[0.258, 2.612]*	0.760	0.480	[0.030. 1.630]*
Letter knowledge	0.763	0.461	[0.099, 1.963]*	0.278	0.342	[- 0.230, 1.272]
Phonological ability	0.380	0.524	[- 0.528, 1.621]	0.082	0.412	[- 0.710, 0.943]
Pronunciation of letter sounds	1.741	0.650	[0.612, 3.293]*	1.720	0.570	[0.690, 2.840]*
Total	5.660	1.332	[3.368, 8.088]*	3.614	0.982	[1.930, 5.542]*

From the results of the analysis of direct and indirect correlation analysis, narrative ability acts as an ability that contributes to other abilities, as well as abilities that are also influenced by other literacy abilities. Literacy ability acts as an ability that is able to mediate the contribution of narrative ability to reading ability. Narrative ability is able to make a significant contribution to the main components of early reading skills, namely word identification skills and decoding skills which are very necessary in early reading skills. The results of the first analysis with the second illustrate the difference in contribution, from a direct contribution to an indirect contribution when emergent literacy skills are involved in the analysis. In the analysis of the second model, the abilities that become media contributions from narrative ability to the ability to identify in reading are components of sentence structure, sound pronunciation, and print conventions. The abilities that mediate between narrative ability and decoding ability in reading are the pronunciation of letter sounds, printed conventions, and the use of sentences when telling a story. Apart from the indirect impact depicted between narrative ability and reading ability, this narrative ability is able to strengthen the components of ability that are very much needed in supporting emergent literacy skills, which ultimately strengthen the foundation of the main ability in accessing knowledge and information, namely early reading skills.

## 5. Discussion

This research is a cross-sectional study to assess narrative ability, emergent literacy ability, comprehensive early word reading ability. In addition, this study also involved a sizable sample of early childhood students with various demographic variations ranging from age, gender, parental education level, place of residence, and family socioeconomic status, so that the research results could be generalized and representative (Kahveci & Güneyli, 2020; Thomas et al., 2019). The results of this study can explain the role and relationship between each of the students' narrative abilities, emergent literacy skills, and students' early reading abilities which can be used as a guide for practitioners in formulating learning programs to strengthen the foundation of early childhood literacy skills before entering school age (Dolean et al., 2021; Krijnen et al., 2020). The first finding of this research is that the narrative abilities of early childhood students are positively and significantly correlated with emergent literacy skills, including several other abilities, such as syntactic abilities, knowledge of letters, phonological abilities, pronunciation of letter sounds, and print conventions (Hadianto et al., 2021b; Kahveci & Güneyli, 2020; Thomas et al., 2019). All emergent literacy skills and some of these abilities form the basis of construction in developing narrative abilities of early childhood students. This finding of a correlation between narrative ability and emergent literacy ability is consistent with the findings of previous studies which revealed narrative abilities in young students with low socioeconomic status (Snow et al., 2020; Thomas et al., 2020).

The concept of narrative ability with emergent literacy skills in several opinions overlaps in aspects of macro and micro structure related to language skills of early childhood students (Bennett et al., 2023; Uchikoshi et al., 2018). However, the correlation between narrative ability and emergent literacy skills in this study explains that the concept of overlap between the two abilities is not too

large because the amount of variation in narrative ability is not divided into other emergent literacy skills (Kahveci & Güneyli, 2020; Snow et al., 2020). Therefore, it can be concluded that this narrative ability is a productive spoken language ability that is supported by abilities that are included in emergent literacy skills. If teachers or parents want to improve students' spoken or oral language skills, then this emergent literacy ability must be developed during their learning development (Thomas et al., 2020; Virinkoski et al., 2018). Another finding is that non-narrative narrative abilities, which are included in emergent literacy skills, have a more significant correlation than the narrative abilities themselves (Hadianto et al., 2021c; Thomas et al., 2020; Uchikoshi et al., 2018). These findings indicate that, in developing students' oral language skills or narrative abilities, it is not only necessary to develop narrative emergent literacy skills, but also to develop non-narrative emergent literacy skills. The results of this study also show that language/syntax skills are very strong in supporting the narrative abilities of early-age students, but the influence of these language skills will decrease as students get older. The findings of this study are in line with the theory of emergent literacy which explains that narrative ability is included in the emergent literacy group but is described as another aspect of language (Bennett et al., 2023; Incognito & Pinto, 2021; Maureen et al., 2018). The number of variations in the narrative abilities of early-age or preschool students who do not have self-identification abilities is relatively small.

The findings of the subsequent research were used to answer the second research objective regarding the cross-sectional relationship between narrative ability and early reading ability in early childhood students. Based on the results of the analysis, the research findings show that all components of emergent literacy skills are able to significantly predict students' identifying and decoding abilities for the next two years (Majorano et al., 2021; Weadman et al., 2022). These findings reinforce the theoretical basis of the emergent literacy framework which states that emergent literacy skills form a significant and strong correlation that can support students' language skills and literacy in the future (Krijnen et al., 2020; Walgermo et al., 2018). The results of this study are in line with other theoretical studies which state that narrative ability has a moderate predictive correlation with early-age students' oral language skills, including the ability as to print conventions, the use of letters, and the ability to read early words (Dolean et al., 2021; Gandolfi et al., 2021, 2021). The main finding to answer the second research objective is that narrative ability can provide predictions of early word reading abilities of early childhood students cross-sectionally for the next two-three years. This finding extends the findings of previous research which only assessed the macro and micro structure of early childhood students' narrative abilities (Majorano et al., 2021; Weadman et al., 2022).

This study also strengthens previous research which found a positive correlation between narrative ability and reading ability in general. These findings indicate that narrative ability is not fully able to predict early reading ability and other emergent literacy skills (Dolean et al., 2021; Gandolfi et al., 2021). It is this emergent literacy ability that is fully capable of being a medium of intermediary for the relationship between narrative ability and initial word reading ability in

early childhood students (Reese et al., 2023; Wolff & Gustafsson, 2022). This finding is a new contribution to research on literacy skills in early childhood students. The results of this study clarify the concept of overlap between narrative skills and other language skills. Narrative ability is a productive spoken language ability that is built by other language skills considering that narrative ability and vocabulary ability have a moderate to strong correlation (Bennett et al., 2023; Maureen et al., 2018). Narrative ability contributes to the amount of variance with the ability to identify words to students' initial reading abilities. Furthermore, when compared to language skills or syntactic abilities, narrative abilities contribute with a smaller amount of variance (Kahveci & Güneşli, 2020; Uchikoshi et al., 2018). Emergent literacy skills mediate the indirect correlation between narrative ability and early word reading ability. This finding explains that oral language skills must be supported by other emergent literacy skills so that students have good initial reading skills and there is interconnection between abilities in developing students' reading skills (Snow et al., 2020; Virinkoski et al., 2018). Storybook retelling instructions can encourage students to produce longer stories when telling stories. This elasticity of story length can have an impact on the use of complex language and decontextualization such as vocabulary development, linguistic unit development, character understanding in stories, and story organization. The components of these abilities can indirectly develop students' schemata knowledge which indirectly contributes to the development of students' early reading skills (Nevo & Vaknin-Nusbaum, 2018; Olaussen, 2022). The development of students' narrative abilities will simultaneously develop the metalinguistic skills needed by students to improve other language skills, such as phonological abilities, the use of vocabulary, phrases, and sentences, which will also help students become more familiar with texts or discourse (Lenhart et al., 2022; Maureen et al., 2020). The indirect contribution of early reading skills is the second pathway in which students' narrative abilities can help students' reading comprehension skills.

## **6. Conclusion, Implications, Recommendation**

From the results of the study, it can be concluded that narrative ability contributes to and is significantly correlated with other emergent literacy abilities. In addition, narrative ability also has an indirect relationship with initial word reading ability. Storybook retelling instructions result in a story that is longer than the original story. This change in story length can have an impact on the use of complex language and decontextualization, such as vocabulary development, development of linguistic units, understanding of characters in stories, and story organization. This narrative ability assists students in developing other emergent literacy skills, which, in turn, helps students' initial word reading skills. The development of students' narrative abilities will at the same time be able to develop the metalinguistic skills needed by students to improve other language skills, such as phonological abilities, the use of vocabulary, phrases, and sentences, which will also help students become more familiar with texts or discourse. This research implies that parents or teachers need to consider various alternatives in developing students' reading skills by optimizing narrative skills and other emergent literacy skills.

This study has several limitations, including several demographic variables that were not considered in data processing such as gender and socioeconomic status which might have an impact on students' narrative abilities, the study also only focused on narrative abilities, emergent literacy skills, and early word reading skills, while data analysis only focused on quantitative data analysis, and the sample involved in this study is not large enough. Based on these limitations, the researcher recommends several suggestions for further research, including the need to consider demographic variables in data processing such as gender and socioeconomic status, which may have an impact on students' narrative abilities; further analysis is needed regarding the impact of developing narrative abilities on language skills others, especially in supporting the main foundation of early childhood students' abilities. It is necessary to strengthen qualitative data that can support findings, such as through interviews with parents to investigate reading habits at home, and a larger sample is expected for further research.

## 7. References

- Altun, D., Tantekin Erden, F., & Hartman, D. K. (2022). Preliterate Young Children's Reading Attitudes: Connections to the Home Literacy Environment and Maternal Factors. *Early Childhood Education Journal*, 50(4), 567–578. <https://doi.org/10.1007/s10643-021-01177-2>
- Anderson, K. L., Atkinson, T. S., Swaggerty, E. A., & O'Brien, K. (2019). Examining relationships between home-based shared book reading practices and children's language/literacy skills at kindergarten entry. *Early Child Development and Care*, 189(13), 2167–2182. <https://doi.org/10.1080/03004430.2018.1443921>
- Bean, A. F., Perez, B. I., Dynia, J. M., Kaderavek, J. N., & Justice, L. M. (2020). Book-Reading Engagement in Children with Autism and Language Impairment: Associations with Emergent-Literacy Skills. *Journal of Autism and Developmental Disorders*, 50(3), 1018–1030. <https://doi.org/10.1007/s10803-019-04306-4>
- Bennett, H., Denston, A., & Arrow, A. (2023). The effectiveness of a parent-implemented, phonological awareness programme on the phonological awareness skills of preschool children. *Australian Journal of Language and Literacy*, 0123456789. <https://doi.org/10.1007/s44020-023-00034-6>
- Bowles, R. P., Antony. (2016). Development of the Narrative Assessment Protocol-2 (NAP-2): A tool for examining young children's narrative skills. Manuscript submitted for publication.
- Ciampa, K., & Gallagher, T. L. (2018). A comparative examination of Canadian and American pre-service teachers' self-efficacy beliefs for literacy instruction. *Reading and Writing*, 31(2), 457–481. <https://doi.org/10.1007/s11145-017-9793-6>
- Decker, S. L., Strait, J. E., Roberts, A. M., & Wright, E. K. (2018). Cognitive Mediators of Reading Comprehension in Early Development. *Contemporary School Psychology*, 22(3), 249–257. <https://doi.org/10.1007/s40688-017-0127-0>
- Dolean, D. D., Lervåg, A., Visu-Petra, L., & Melby-Lervåg, M. (2021). Language skills, and not executive functions, predict the development of reading comprehension of early readers: evidence from an orthographically transparent language. *Reading and Writing*, 34(6), 1491–1512. <https://doi.org/10.1007/s11145-020-10107-4>
- Dussling, T. M. (2018). Examining the effectiveness of a supplemental reading intervention on the early literacy skills of English language learners. *Literacy Research and Instruction*, 57(3), 276–284.



- <https://doi.org/10.1080/19388071.2018.1453898>
- Gandolfi, E., Traverso, L., Zanobini, M., Usai, M. C., & Viterbori, P. (2021). The longitudinal relationship between early inhibitory control skills and emergent literacy in preschool children. *Reading and Writing*, 34(8), 1985–2009. <https://doi.org/10.1007/s11145-021-10131-y>
- Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021a). Does reading comprehension competence determine level of solving mathematical word problems competence? *Journal of Physics: Conference Series*, 1806(1). <https://doi.org/10.1088/1742-6596/1806/1/012049>
- Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021b). Enhancing scientific argumentation skill through partnership comprehensive literacy. *Journal of Physics: Conference Series*, 2098(1). <https://doi.org/10.1088/1742-6596/2098/1/012015>
- Hadianto, D., Damaianti, V. S., Mulyati, Y., & Sastromiharjo, A. (2021c). The role of multimodal text to develop literacy and change social behaviour foreign learner. *International Journal of Instruction*, 14(4), 85–102. <https://doi.org/10.29333/iji.2021.1446a>
- Hadianto, D., S. Damaianti, V., Mulyati, Y., & Sastromiharjo, A. (2022). Effectiveness of Literacy Teaching Design Integrating Local Culture Discourse and Activities to Enhance Reading Skills. *Cogent Education*, 9(1), 0–13. <https://doi.org/10.1080/2331186X.2021.2016040>
- Hettiarachchi, S. (2022). The effectiveness of the adapted Box Clever language intervention programme in the development of vocabulary and narrative skills of deaf and hard of hearing children. *Deafness and Education International*, 24(1), 65–91. <https://doi.org/10.1080/14643154.2020.1721158>
- Hung, C. O. Y., & Loh, E. K. Y. (2021). Examining the contribution of cognitive flexibility to metalinguistic skills and reading comprehension. *Educational Psychology*, 41(6), 712–729. <https://doi.org/10.1080/01443410.2020.1734187>
- Incognito, O., & Pinto, G. (2023). Longitudinal effects of family and school context on the development on emergent literacy skills in preschoolers. *Current Psychology*, 42(12), 9819–9829. <https://doi.org/10.1007/s12144-021-02274-6> *Psychology*, 9819–9829. <https://doi.org/10.1007/s12144-021-02274-6>
- Justice, L. M., Bowles, R. P., & Skibbe, L. E. (2006). Measuring preschool attainment of print-concept knowledge: A study of typical at-risk 3- to 5-year-old children using item response theory. *Language, Speech, and Hearing Services in Schools*, 37, 224–235.
- Kahveci, G., & Güneyli, A. (2020). The effect of personal narrative intervention on late talkers' personal narrative generation skills. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1758288>
- Kim, Y. S. G., Petscher, Y., & Vorstius, C. (2021). The Relations of Online Reading Processes (Eye Movements) with Working Memory, Emergent Literacy Skills, and Reading Proficiency. *Scientific Studies of Reading*, 25(4), 351–369. <https://doi.org/10.1080/10888438.2020.1791129>
- Krijnen, E., van Steensel, R., Meeuwisse, M., Jongerling, J., & Severiens, S. (2020). Exploring a refined model of home literacy activities and associations with children's emergent literacy skills. In *Reading and Writing* (Vol. 33, Issue 1). Springer Netherlands. <https://doi.org/10.1007/s11145-019-09957-4>
- Lenhart, J., Suggate, S. P., & Lenhard, W. (2022). Shared-Reading Onset and Emergent Literacy Development. *Early Education and Development*, 33(4), 589–607. <https://doi.org/10.1080/10409289.2021.1915651>
- Majorano, M., Bastianello, T., Bodea-Hategan, C., Fantuzzi, P., Fontana, G., Hoste, E.,

- Lombardi, M., Standaert, A., Talas, D., Trifu, R., Vescogni, L., & Persici, V. (2021). Early Literacy Skills and Later Reading and Writing Performance Across Countries: The Effects of Orthographic Consistency and Preschool Curriculum. *Child and Youth Care Forum*, 50(6), 1063–1085. <https://doi.org/10.1007/s10566-021-09611-7>
- Majorano, M., Ferrari, R., Bertelli, B., Persici, V., & Bastianello, T. (2022). Talk – An Intervention Programme for Enhancing Early Literacy Skills in Preschool Children: A Pilot Study. *Child Care in Practice*, 28(4), 691–707. <https://doi.org/10.1080/13575279.2021.1929844>
- Matsumoto, H., & Tsuneda, M. M. (2019). Teachers’ beliefs about literacy practices for young children in early childhood education and care settings. *International Journal of Early Years Education*, 27(4), 441–456. <https://doi.org/10.1080/09669760.2018.1547630>
- Maureen, I. Y., van der Meij, H., & de Jong, T. (2018). Supporting Literacy and Digital Literacy Development in Early Childhood Education Using Storytelling Activities. *International Journal of Early Childhood*, 50(3), 371–389. <https://doi.org/10.1007/s13158-018-0230-z>
- Maureen, I. Y., van der Meij, H., & de Jong, T. (2020). Enhancing Storytelling Activities to Support Early (Digital) Literacy Development in Early Childhood Education. *International Journal of Early Childhood*, 52(1), 55–76. <https://doi.org/10.1007/s13158-020-00263-7>
- Neumann, M. M., & Neumann, D. L. (2019). Validation of a touch screen tablet assessment of early literacy skills and a comparison with a traditional paper-based assessment. *International Journal of Research and Method in Education*, 42(4), 385–398. <https://doi.org/10.1080/1743727X.2018.1498078>
- Nevo, E., & Vaknin-Nusbaum, V. (2018). Joint Reading of Informational Science Text Versus Narrative Stories: How Does each Affect Language and Literacy Abilities Among Kindergarteners? *Reading Psychology*, 39(8), 787–819. <https://doi.org/10.1080/02702711.2018.1547343>
- Olaussen, I. O. (2022). A playful orchestration in narrative expressions by toddlers – a contribution to the understanding of early literacy as event. *Early Years*, 42(2), 137–150. <https://doi.org/10.1080/09575146.2019.1600138>
- Ong’ayi, D. M. M., Dede Yildirim, E., & Roopnarine, J. L. (2020). Fathers’, Mothers’, and Other Household Members’ Involvement in Reading, Storytelling, and Play and Preschoolers’ Literacy Skills in Kenya. *Early Education and Development*, 31(3), 442–454. <https://doi.org/10.1080/10409289.2019.1669125>
- Pinto, G., Bigozzi, L., Vezzani, C., & Tarchi, C. (2017). Emergent literacy and reading acquisition: a longitudinal study from kindergarten to primary school. *European Journal of Psychology of Education*, 32(4), 571–587. <https://doi.org/10.1007/s10212-016-0314-9>
- Reese, E., Barrett-Young, A., Gilkison, L., Carroll, J., Das, S., Riordan, J., & Schaughency, E. (2023). T ender Shoots: a parent book-reading and reminiscing program to enhance children’s oral narrative skills. *Reading and Writing*, 36(3), 541–564. <https://doi.org/10.1007/s11145-022-10282-6>
- Secord, W. A., & Semel, E. (2004). Clinical evaluation of language fundamentals preschool (2nd ed.). San Antonio, TX: Harcourt Assessment.
- Snow, P. C., Timms, L., Lum, J. A. G., & Powell, M. B. (2020). Narrative language skills of maltreated children living in out-of-home care. *International Journal of Speech-Language Pathology*, 22(2), 117–128. <https://doi.org/10.1080/17549507.2019.1598493>
- Soto-Calvo, E., Simmons, F. R., Adams, A. M., Francis, H. N., & Giofre, D. (2020). Pre-

- Schoolers' Home Numeracy and Home Literacy Experiences and Their Relationships with Early Number Skills: Evidence from a UK Study. *Early Education and Development*, 31(1), 113-136. <https://doi.org/10.1080/10409289.2019.1617012>
- Thomas, N., Colin, C., & Leybaert, J. (2019). Impact of interactive reading intervention on narratives skills on children with low socio-economic background. *European Early Childhood Education Research Journal*, 27(6), 837-859. <https://doi.org/10.1080/1350293X.2019.1678924>
- Thomas, N., Colin, C., & Leybaert, J. (2020). Interactive Reading to Improve Language and Emergent Literacy Skills of Preschool Children from Low Socioeconomic and Language-Minority Backgrounds. *Early Childhood Education Journal*, 48(5), 549-560. <https://doi.org/10.1007/s10643-020-01022-y>
- Timperley, S., Schaughency, E., Riordan, J., Carroll, J., Das, S., & Reese, E. (2022). Tender Shoots: Effects of a Preschool Shared Book Reading Preventive Intervention on Parent-Child Reading and Parents' Involvement in the First Year of School. *School Mental Health*, 14(2), 238-253. <https://doi.org/10.1007/s12310-022-09505-6>
- Torr, J. (2019). Infants' Experiences of Shared Reading with Their Educators in Early Childhood Education and Care Centres: An Observational Study. *Early Childhood Education Journal*, 47(5), 519-529. <https://doi.org/10.1007/s10643-019-00948-2>
- Uchikoshi, Y., Yang, L., & Liu, S. (2018). Role of narrative skills on reading comprehension: Spanish-English and Cantonese-English dual language learners. *Reading and Writing*, 31(2), 381-404. <https://doi.org/10.1007/s11145-017-9790-9>
- Virinkoski, R., Lerkkanen, M. K., Holopainen, L., Eklund, K., & Aro, M. (2018). Teachers' Ability to Identify Children at Early Risk for Reading Difficulties in Grade 1. *Early Childhood Education Journal*, 46(5), 497-509. <https://doi.org/10.1007/s10643-017-0883-5>
- Walgermo, B. R., Foldnes, N., Uppstad, P. H., & Solheim, O. J. (2018). Developmental dynamics of early reading skill, literacy interest and readers' self-concept within the first year of formal schooling. *Reading and Writing*, 31(6), 1379-1399. <https://doi.org/10.1007/s11145-018-9843-8>
- Weadman, T., Serry, T., & Snow, P. C. (2022). Oral Language and Emergent Literacy Strategies Used by Australian Early Childhood Teachers During Shared Book Reading. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-022-01381-8>
- Westerveld, M. F., Paynter, J., & Wicks, R. (2020). Shared Book Reading Behaviors of Parents and Their Verbal Preschoolers on the Autism Spectrum. *Journal of Autism and Developmental Disorders*, 50(8), 3005-3017. <https://doi.org/10.1007/s10803-020-04406-6>
- Woodcock, R. (2007). Woodcock-Johnson Tests of Achievement (3rd ed., normative update). Itasca, IL: Riverside.
- Wolff, U., & Gustafsson, J. E. (2022). Early phonological training preceding kindergarten training: effects on reading and spelling. *Reading and Writing*, 35(8), 1865-1887. <https://doi.org/10.1007/s11145-022-10261-x>
- Zanchi, P., Zampini, L., & Fasolo, M. (2020). Oral narrative competence and literacy skills. *Early Child Development and Care*, 190(14), 2309-2320. <https://doi.org/10.1080/03004430.2019.1572132>