Relationship between oral narrative and vocabulary skills among bilingual language-minority children and their monolingual peers in primary school

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Abstract
Aim: This study investigates whether the conditions of bilingual language-minority (BLM) children versus monolingualism have different effects on oral narrative and vocabulary skills in the societal language (SL-Italian) and on the predictive interrelations between the two skills.
Methodology: A total of 112 primary school children (44% BLM L1-Chinese, L2-Italian and 56% Italian monolinguals) aged 7–11 years (*M* age = 113 months, *SD* = 12.03; 44 girls, 68 boys) performed an oral story-narration task and a vocabulary task. The purpose of the former was to assess the children's textual (structure, coherence) and language (cohesion, word productivity) competences, while the latter test assessed their ability to define written words by implementing different cognitive-linguistic processes. A parental questionnaire was used to obtain information regarding age, socioeconomic status (SES), and home language exposure.
Data analysis: We compared BLM and monolinguals' lexical competence and oral narrative ability in an independent *t*-test analysis. We further verified the relationship between the lexical and oral narrative abilities in Spearman bivariate correlations analyses and investigated their interrelations in a stepwise regression model. Age and SES were controlled for.
Findings: BLM children fall significantly behind their monolingual peers on textual structure and lexical skills. Meanwhile, their textual and language competences in stories are similar. In the total sample and monolingual group, lexical skills are positively correlated with the text structure. Results of stepwise regression analyses show that lexical skills completely mediate the effect of BLM versus monolingualism on text structure.
Originality: Results on school-aged BLM (L1-Chinese, L2-Italian) children's oral narrative, vocabulary skills, and their relations extend previous research on bilingualism.
Significance: The scarce narrative structure in BLM children's stories is related to limited vocabulary input. High-level textual processing difficulties may result from the high cognitive effort of managing both the choosing of adequate words in L2 and composing an oral story concurrently.

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Introduction

The rapid growth of linguistic heterogeneity in classrooms (see Martins et al., 2019) raises questions on whether and to what extent the conditions of bilingual language-minority children, which necessarily include limited input when compared with the circumstances of monolingual children, affect the development of the societal language, a precondition for success in school achievements. Research indicates that bilingual children exhibit a series of advantages over monolinguals when performing language tasks (Kang, 2012). However, the heterogeneity of this population, regarding the degree and quality of exposure to more languages in the home context (Kim et al., 2018), limits the generalisability of the findings. Consistent with previous studies on bilingual development, the degree and quality of language exposure that the surrounding context provides to children and their language growth are significantly related (Unsworth, 2016). Given that bilingual language-minority (BLM) children's acquisition of the L2-societal language is limited to the school context (Grosjean, 2004), it is possible BLM children's performance is not equal to that of monolingual children of the same age (see e.g., Incognito et al., 2021). However, the connection between the language background and situation of BLM children and their L2-societal language development is still poorly understood. Few studies have focused on exploring the relationship between BLM children and their performance in scholastic tasks, expressed through the use of the L2-societal language. Narrative and vocabulary skills have been considered crucial for language development (e.g., Biemiller, 2006; Caballero et al., 2020; Cohen-Mimran, 2009) and ultimately, for reading and writing skills (Pinto et al., 2009). The correct mastering of those skills is a desired goal of formalised literacy. Furthermore, it is necessary for studying and completing examinations, as well as for social interactions with teachers and peers (e.g., Cummins, 2000). In fact, primary school children are required to produce oral texts and comprehend the meaning of words in written texts. However, we know relatively little about potential differences between BLM and monolingual children in their levels of L2 oral narrative and vocabulary skills, or about the interrelations between these two skills.

We aim to address these issues in order to prevent academic difficulties among BLM school-aged children, who are still learning those skills (Planty et al., 2009). Furthermore, we conducted this study in the Italian context that allows for focusing on a minimally investigated population of children who learn two languages (L1-Chinese and L2-Italian) with few morphological and grammatical similarities, making the transfer of one language to the other arduous (Tong et al., 2018). Situated in the central part of Italy, Tuscany hosts one of the larger Chinese communities in Europe, characterised by Chinese-origin families that cultivate Italian-Chinese bilingualism for their children (Omodeo, 2015). Research on the oral narrative and vocabulary skills expressed through societal language among BLM children, whose L1 and L2 are two structurally different languages, such as Chinese and Italian, might be valuable to evaluate further how learning and growth contexts (i.e., school and home) influence the language development of BLM children. To improve the strengths of the conclusions that can be drawn from this study, the possible sources of variance related to the children's age and socioeconomic status (SES) were controlled.

Oral narrative skills of BLM children

The key role of oral language proficiency in communication and academic progress is well documented in the literature (Prevoo et al., 2016). Oral narratives constitute a familiar task to children from culturally and linguistically diverse backgrounds, and these narratives are useful in measuring their language proficiency (e.g., Gutierrez-Clellen, 1995). Studies converge in identifying the predictive role of oral narrative skills for a formalised literacy acquisition later. This contribution has further been confirmed among both monolingual (e.g., Pinto et al., 2016) and bilingual (August & Shanahan, 2006) children.

Research on oral narrative skills among BLM children usually focuses around the preschool years. Hipfner-Boucher et al. (2015) found few differences in the number of utterances or story grammar when comparing 5- and 6-year-old English language learners (ELL) who spoke and heard English most often at home (ELL English language users) and their English-monolingual peers. Instead, the performance of a subgroup of ELL who spoke and heard a minority language most often at home (ELL minority language users) differed significantly with that of ELL English language users and English-monolingual peers on the various microstructure measures: the number of different words, sentence length, and grammaticality. The similar scores obtained by bilingual and monolingual children in a narrative macrostructure can be linked to Cummins' (1979) linguistic interdependence hypothesis that higher-order elements of linguistic processing and organisation are subject to cross-linguistic transfer. Furthermore, as suggested by Berman (2001), bilingual children rely on strategies similar to those of their monolingual peers to conceptualise, plan, and organise their narrations. Within the few studies considering children facing two structurally distant languages, such as Chinese and Italian, Bonifacci et al. (2018) found that bilinguals and monolinguals did not differ regarding macro-structural elements (goal, outcome, and mental states), text cohesion, and linguistic and morphosyntactic elements. Instead, the stories of the bilinguals were poorer regarding specific narrative genre's elements, like settings and characters' attempts, and they presented more lexical errors, a lower number of the total words, and little lexical variety.

The question of whether the performance of BLM children from Chinese-speaking homes in oral narrative tasks is similar to that of their monolingual peers acquires special relevance if investigated for the primary school years. The task of telling an invented story through L2 might be particularly demanding for school-age BLM children for several reasons. First, evidence-informed activities and tools to enhance, support, and monitor children's oral language narrative skills in daily primary school's activities are still lacking (Dockrell et al., 2015). Few daily school's opportunities to develop oral language skills may contribute to intensifying difficulties in managing cognitive (e.g., working memory and executive processing) and high-level processing (e.g., idea generation and textual planning) when composing a story orally in L2.

Vocabulary skills of BLM children

There is an open debate about whether and to what extent limited input of L2-societal language in the home context affects the L2 vocabulary skills of BLM children. Several studies have documented a vocabulary disadvantage in bilingual children, especially in preschool bilingual children who speak minority languages at home (Bonifacci et al., 2018) and primary school BLM children, Grades 1–4 (Appel & Vermeer, 1998) and Grades 2 and 5 (Geva & Farnia, 2012). Nicoladis and Jiang (2018) showed that Mandarin-English bilingual children attained lower vocabulary measure scores than monolingual children. This relationship has been linked to the slower lexical access (Verhoeven, 2000). Although there have been several studies documenting lower

majority-language vocabulary skills among bilinguals than their monolingual peers, these results have not been completely confirmed in the literature, hence a more complex and contrasting picture. The empirical findings support the hypothesis that bilingual and monolingual vocabulary performances are rather similar. For example, Schwartz and Katzir (2012) found, predictably, that Russian-speaking Israeli BLM children (L1-Russian; L2-Hebrew) in Grade 2 perform lower than their Hebrew-speaking monolingual peers on the L2-Hebrew vocabulary tasks. However, bilingual children reach a similar level of vocabulary performance after a year of schooling. This result was linked to the high SES level of the children's family background. When examining children's vocabulary skills, it is important to consider the interaction with SES, in addition to age, a factor that might contribute to explaining the different literacy opportunities that children are exposed to (e.g., Stanat & Christensen, 2006), in learning and instruction environments (e.g., school and family). Studies on vocabulary skills in bilingualism also mention the importance of considering the characteristics of the L1 and L2 involved. Two structurally different languages may constitute an increasing source of difficulty for the retrieval of lexical roots of words or phonetic and grammatical language structures. In the context of the Italian language, for example, Chinese-speaking BLM children learning Italian as L2 may encounter an additional difficulty linked to the fact that these two languages are very different at structural and morphological levels. This difference between the two languages limits the vocabulary knowledge in one language so that it cannot be easily transferred to the other language. Furthermore, it is important to consider that a large part of the results regarding the question of the vocabulary skills of bilinguals derives from the use of single-word vocabulary tasks involving children in defining a word or naming an object. There is a need to adopt measures of vocabulary skills that are more adherent to daily school activities, such as involving children in identifying the correct meaning of a word after they have read a brief text.

Interplay between narrative and vocabulary skills of BLM children

The interrelations between narrative and vocabulary skills have been mainly examined among monolingual children, while especially focusing on written textual skills. The findings show different types of contributions of vocabulary skills to narrative skills. On one hand, studies have found that (oral) vocabulary skills have an indirect role in textual writing (Kim et al., 2011, 2015). On the other hand, other studies found that vocabulary directly contributes to textual writing (e.g., Olinghouse & Leaird, 2009; Olinghouse & Wilson, 2013). Empirical findings on the role of vocabulary knowledge in oral narrative skills among bilingual children are relatively contrasting. Uccelli and Páez (2007) analysed oral vocabulary and narrative skills in a longitudinal sample of 24 Spanish-English bilingual children from low socioeconomic backgrounds. They found that vocabulary was positively, but only moderately, associated with narrative skills within each language. Consistent with this, Korecky-Kröll et al. (2019) examined 4-year-old monolingual (German-speaking) and bilingual (Turkish–German) kindergarten children and found that vocabulary and narrative skills are significantly related. Contrastingly, other studies have found that vocabulary is a weak predictor of some aspects of the ability to tell a story. Nicoladis and Jiang (2018) showed that regarding monolingual children, the size of vocabulary is an important predictor of lexical variety in stories, while bilinguals (Mandarin-English) compensate for their lower vocabulary sizes by relying on cognitive abilities (attentional control) to choose words they can say in English to express concepts in stories. The reason underlying this result is that bilingual children can strategically allocate their cognitive resources to construct many different words to convey the meanings in the story. Regarding the Italian language, as shown by a study on kindergartener Italian monolinguals and BLM children (Bonifacci & Tobia, 2017), vocabulary skills were not a significant predictor of the total macro-structural score of narratives in either of the two groups. Clearly, there

is a need to expand this investigation to children learning two different languages (e.g., McBride-Chang et al., 2006) from the grammatical, syntactic, and morphological points of view.

Rationale

Oral narrative and vocabulary skills are crucial for reading and writing skills. The relationship between oral narrative and vocabulary skills has scarcely been investigated among bilingual language-minority children, especially when they are learning two typologically distant languages, such as Chinese and Italian. This study sought to determine whether and how the linguistic condition of BLM children affects L2 expressive (i.e., oral narratives) and receptive (i.e., vocabulary) language skills as well as their interrelations. This study innovatively focuses on the scarcely investigated population of BLM school-age children learning two morphosyntactically distant languages, such as L1-Chinese and L2-Italian. BLM children in our sample obtain input from each language (L1-Chinese and L2-Italian) from different sources (contexts and speakers) and in different amounts. In fact, those children receive formal in-class instructional input in L2-Italian and out-of-class/family input in L1-Chinese. Thus, the quantity and quality of L2 input in BLM children is less than those of their Italian monolingual peers who receive both formal in-class instructional and out-of-class/family input in L2-Italian. To evaluate children's narrative skills, we chose to involve children in the task of narrating an invented story. Oral narrative productions allowed us to evaluate a multidimensional set of skills, including macro indexes of textual competences (i.e., textual structure and coherence) and micro indexes of linguistic competences (i.e., textual cohesion and word productivity). To evaluate the vocabulary skills of children, we chose to administer a task where children identified the lexical-semantic value of the words in a brief written text. Finally, the characteristics of SES and age were controlled to explore the relationship between vocabulary and oral narrative skills.

Aims and hypothesis

This study aimed to

1. Investigate oral narrative and vocabulary skills expressed through the Italian societal language among BLM children (L1-Chinese and L2-Italian) and their monolingual peers (L1-Italian) while controlling for SES and age.
2. Investigate the relationship between the oral narrative and vocabulary skills among BLM children (L1-Chinese and L2-Italian) and their monolingual peers (L1-Italian) while controlling for SES and age.

Regarding the first aim, consistent with the results in the literature that bilingual language-minority children are poorer in some macro-structural (e.g., narrative settings and story characters' attempts) and micro-linguistic (e.g., word number) elements, we expect BLM children to compose stories with a lower textual quality than their monolingual peers (Hypothesis 1a). Furthermore, for what concerns the first aim, the reviewed studies regarding vocabulary skills state that restricted exposure to the societal language (in this case, L2-Italian) in the family context of BLM children could result in a low level of L2 vocabulary knowledge. Consistent with the literature, we expect that the L2 vocabulary performance of BLM children (L1-Chinese and L2-Italian) is lower than that of their Italian-speaking monolingual peers (Hypothesis 1b).

Regarding the second aim, we hypothesised a relationship between oral narrative and vocabulary skills among both BLM and monolingual children. Specifically, we expected that the scarce

vocabulary skills will negatively impact the narrative structure among BLM children, owing to the high cognitive effort to manage both the choice of adequate words (e.g., fictional words and connectives) in L2 for the story while planning and composing a narrative story plot concurrently.

Method

Participants

A total of 112 primary school children aged 7–11 years and living in Italy (*M* age = 113 months, *SD* = 12.03; 44 girls and 68 boys) participated in this study. Sixty-three children (56%) were monolinguals, L1-Italian children, exposed at the societal language both at home and school, and 49 children (44%) were L1-Chinese language-minority children. Other minority languages in the children's classrooms (such as Albanian and Romanian) were not included in this study as the number of these children fell under 1% of the class size. The answers to the parental questionnaire attached to informed consent show that in our sample all the Chinese children were born in Italy to Chinese-speaking parents. Chinese children were exposed to L2 (Italian) for at least 30% of their time. The large proportion of the minority children with Chinese as their L1 is related to the fact that they live in the central part of Italy with a long tradition of Chinese immigration. Given that in Italy children go to the public school closest to their residence, classrooms had a lot of Chinese bilingual students. Children included in this study attended different classrooms of the primary school: second grade (*N* = 19); third grade (*N* = 38); fourth grade (*N* = 30); fifth grade (*N* = 35). Children with any known special educational needs and impairments or disorders were excluded to avoid any additional difficulties which potentially affect their performance. School authorities, parents, and the children consented to participating in the study. Background information regarding home language characteristics and socio economic status, defined as the educational level of parents, that is, International Standard Classification of Education; ISCED-11 (UNESCO Institute for Statistics, 2012), was collected using a parental questionnaire attached to the informed consent sheet. Based on the educational level of the parents, the sample was distributed as follows: 1.8% primary school, 31.3% middle school, 17.9% 3-year professional qualification, 29.5% high school, 8.9% another higher education qualification other than a high school diploma (conservatory, arts), and 10.7% master's degree.

Procedure, tasks, and coding

Authorisation from the school and informed parental consent were obtained prior to each child's participation. During school days, the tasks were administered in the societal language (SL-Italian) in two sessions: (1) children composed an invented story via oral language in an individual session in a quiet room in the school near the classroom; (2) children tackled the 'Multidimensional Vocabulary Tasks' individually (Boschi et al., 1989, 1996) in a collective session.

Oral narrative skills

An invented story narrative task was used to assess the oral narrative skills. Children were asked to compose an invented story orally (see Bigozzi et al., 2016; Pinto et al., 2017). The administration was as follows: 'Would you like to tell me a story?' The narratives were transcribed to proceed with the codifying phase. In accordance with the previous studies (e.g., Pinto et al., 2020) regarding textual competences, the indexes of structure, cohesion, and coherence were measured.

The structure of the story (Spinillo & Pinto, 1994; Pinto et al., 2019) was coded based on the presence/absence of different narrative genre elements (e.g., Labov & Waletzky, 1967): title, opening, setting, description of character/s, problem, central event, resolution of the problem, and story closing. Five levels of story structure were identified: no telling (score 0), no story (score 1), sketch story (score 2), incomplete story (score 3), essential story (score 4), and complete story (score 5). Agreement between the judges was 99%. The cases of disagreement (1%) were resolved through discussion.

The degree of text cohesion (Halliday & Hasan, 1976) derived from the total number of temporal (e.g., then, after, consequently) and causal (e.g., because, thus) linguistic connectives proportioned to the total number of words. Agreement between the judges was sought upon 99%. The cases of disagreement (1%) were resolved through the recount of connectives.

The text coherence (adaptation from Shapiro & Hudson, 1997) was given by the number of incoherencies, counted, and proportioned to the total number of sentences. Agreement between the judges was sought upon 85%. The cases of disagreement (15%) were resolved through discussion.

The linguistic competence in the children's stories was analysed on the basis of word and sentence productivity by the number of words and sentences counted, respectively.

As a process variable, the children's 'narrative speed' was given by the proportion of the total number of words used and the total seconds the child took to tell the story.

Vocabulary skills

The children's vocabulary skills were assessed through the Multidimensional Vocabulary Tasks (Boschi et al., 1989, 1996) designed for the Italian language. The test evaluates the ability to define words by implementing the cognitive-linguistic processes of categorisation based on perceptual and functional attributes and the ability to construct synonyms and antonyms. The test also evaluates the ability to define the contextually correct meaning of polysemic words that are frequent in the Italian language, such as bello (beautiful), buono (good), and grande (big), which have different meanings depending on the phrasal context in which they are inserted. Following the procedure reported in the test manual, the children were asked to read a short, written text (50–100 words), and answer 20 multiple-choice questions regarding the meaning of some words. Before the test began, a familiarisation reading of the task was conducted. Scores ranged up to 20. The children were allotted the appropriate test regarding their school year. Based on the test manual, each child received a final correctness score.

Socioeconomic status

A parental questionnaire attached to informed consent was used to collect information regarding family socioeconomic status (SES). The index of the ISCED level (International Standard Classification of Education) was considered as follows: a score from 'ISCED 1 – Primary education' till 'ISCED 6 – bachelor's or master's degree' was awarded for the educational level of fathers and mothers. The SES scores of the children were calculated based on the higher ISCED level among parents. The measure consists of the number of years of the education of the father and mother (see also Haman et al., 2017).

Data analysis

According to Tabachnick and Fidell's (2013) recommendation, the presence of univariate outliers was checked. From the initial sample of 167 children, 55 outliers were identified and eliminated.

First, the descriptive statistics were computed. Using Levene's test for the residual homogeneity of variances, the homogeneity of variances was tested if $p > .05$. Normality was tested using the Shapiro–Wilk test if $p > .05$.

The independent t test was computed to verify the differences between monolingual and bilingual children in the development of lexical competence and oral narrative ability (structure, coherence, cohesiveness, and word productivity). Furthermore, to verify the relationship between the lexical and oral narrative variables, Spearman bivariate correlations were conducted, both in the total sample and in the specific linguistic groups (monolingual and BLM children).

A linear regression analysis was conducted to investigate the impact of mono- or bilingual children on lexical and oral narrative skills and the impact that vocabulary skills had on the oral narrative skills of the structure. Age was treated as a continuous variable and measured in months, and parental education levels were used as control variables. Then, a stepwise regression model was used when the linguistic condition (mono- or bilingualism) and oral narrative structure ability are related. This step allows to test whether the intervention of a third variable (i.e., lexical ability) might partially or totally explain the original effect found, meanwhile children's age and their parents' educational level are controlled.

Results

Table 1 shows the main descriptive statistics (mean, *SD*, minimum, and maximum) and p values for the homogeneity of variance and normality of variable scores. The variances were homogeneously distributed for all the variables that were partially normal.

Regarding the comparison between monolingual and BLM children, results from the independent t tests showed statistically significant differences between the monolingual and BLM children in lexical competence ($t = 4.34$, $p < .001$) and only in the structure oral narrative skills ($t = 2.30$, $p < .05$), but not in coherence, cohesiveness, and word productivity. In both cases, the monolingual children scored statistically higher than their BLM peers. In addition, statistically significant differences in terms of narration speed were found between monolinguals and BLM children ($t = -1.90$, $p < .05$). In this case, the results show that BLM children used significantly more time to narrate their stories.

Regarding the second aim, the relationships between linguistic condition, lexical competence, and oral narrative skills were computed with Spearman bivariate correlation coefficients, which are shown in Table 2, both for the total sample and for the sample split in two groups (monolinguals and BLM).

In the total sample, the first relationship was found between the linguistic condition (monolingual or BLM) and lexical competence ($r = -.39$; $p < .01$), and between the linguistic condition and the structure of oral narrative skills ($r = -.22$, $p < .05$). These results showed that monolingualism is associated with higher scores in both lexical competence and structure skills. Other positive relationships were found between structure skills, lexical competence ($r = .36$, $p < .01$) and word productivity ($r = .46$, $p < .01$).

To verify the relationships within the two language groups, the participants were divided into monolingual and BLM. The relationship between structure and lexical competence was significant only among monolingual children ($r = .40$, $p < .01$), as well as the relationship between structure and word productivity ($r = .40$, $p < .01$). These results showed that higher structural scores were associated with higher scores in lexical skills and word productivity. Regarding BLM children, a relationship was found only between structure and word productivity ($r = .49$, $p < .01$). This result showed that higher structure scores were associated with higher word productivity scores.

Table I. Descriptive statistics of the sample.

			M (SD)	Min	Max	Levene's test[a]	Shapiro–Wilk's test[a]
Lexical competence		Monolingual	10.34 (5.16)	−1	17	2.32	.98
		BLM	6.28 (4.27)	−1	17		
ON skills	Structure	Monolingual	3.17 (1.02)	1	5	.44	.95*
		BLM	2.71 (1.08)	1	4		
	Text coherence	Monolingual	2.52 (1.15)	1	4	.25	.86*
		BLM	2.45 (1.19)	1	4		
	Text cohesion	Monolingual	2.38 (1.08)	1	4	.34	.89*
		BLM	2.53 (1.14)	1	4		
	Word productivity	Monolingual	139.51 (84.86)	22	373	.35	.91*
		BLM	109.73 (81.32)	8	361		
Narrative speed (time in second)		Monolingual	145 (76.3)	30	360	3.82	.95*
		BLM	178 (98.5)	30	360		

Note. ON skills: oral narratives skills.
[a]Test was calculated on total sample.
*$p < .05$.

Table 2. Correlation matrix: Spearman coefficient calculated on total sample, monolingual, BLM children.

		LC	Structure	Text cohesion	Text coherence	WP
Total sample	Monolingual/BLM	−.39**	−.22*	.07	−.03	−.18
	LC	–	.36**	.01	−.05	.11
	Structure		–	−.04	−.16	.46**
	Text cohesion			–	−.07	−.22
	Text coherence				–	.11
	WP					–
Monolingual	LC	–	.40**	.06	−.14	.12
	Structure		–	−.05	−.23	.40**
	Text cohesion			–	.06	−.23
	Text coherence				–	.02
	WP					–
BLM	LC	–	.21	−.02	.04	.06
	Structure		–	−.01	−.11	.49**
	Text cohesion			–	−.21	−.18
	Text coherence				–	.23
	WP					–

Note. LC: lexical competence; WP: word productivity.
*$p < .05$. **$p < .01$.

After testing the relationships between the variables, linear regression analyses were conducted to verify the effects of mono- or bilingualism on the variables of lexical competence and oral narrative skills (structure, cohesion, coherence, and word productivity). The results showed that linguistic conditions influence lexical competence ($b = −.38, p < .001$) and structure ($b = −.25, p < .05$),

Table 3. Linear regression models.

Independent variable	Dependent variables	*b*	*P* value	R^2
Linguistic condition	Lexical competence	−.38	<.001	.16
Linguistic condition	Narrative structure	−.25	.018	.06
Lexical competence	Narrative structure	.36	<.001	.13

Table 4. Stepwise regression.

		B	*F (df)*	R^2
Step 1	Age	.06	.19 (2, 104)	.004
	Parents' education	.02		
Step 2	Age	.06	3.90 (1, 103)*	.040*
	Parents' education			
	Mono/BLM	−.20*		
Step 3	Age	.07	12.52 (1, 102)**	.145**
	Parents' education			
	Mono/BLM	−.05		
	Lexical competence	.35**		

Note. df: degrees of freedom (i.e., maximum number of logically independent values, which are values that have the freedom to vary, in the data sample).
*$p < .05$. **$p < .01$.

independent of age and the education level of the parents. The relevant conditions, however, do not influence cohesion, coherence, and word productivity.

Moreover, the results showed that lexical competence had an effect on structure ($b = .36$, $p < .001$). The summary of the regressions is shown in Table 3.

Given these effects, we wanted to test whether lexical competence could partially or completely mediate the original relationship between linguistic conditions (i.e., monolingual vs. bilingual language-minority) and structure. The results of the stepwise regression showed that, while controlling for children's age and their parent's education level, the model is significant, and that lexical competence mediates the effect of the linguistic condition on structure. Table 4 shows the steps and significance of the stepwise regression model.

Specifically, the model illustrated in Step 3, that assumed as predictors children's age, parents' education, children's linguistic condition (bilingual language-minority or monolingual status), and children's lexical competence, obtained the higher significance, $F(1, 102) = 12.52$; $p < .01$. The model in Step 3 show that children's lexical competence predicts their oral narrative competence ($B = .35$; $p < .01$) explaining about the 14% of variance ($R^2 = .145$; Table 4).

Discussion

The results of this study provide evidence that the linguistic condition of the bilingual language-minority children (BLM: L1-Chinese and L2-Italian) is associated with similarities and differences in L2 oral narrative and vocabulary skills in regard to their monolingual peers. The findings extend previous research which has scarcely investigated the effects of the condition of BLM on oral

narrative and vocabulary skills among Chinese primary school children raised in Chinese-speaking families in Italy. The investigation of these effects was enriched by considering age and SES.

Regarding the first aim of investigating oral narrative skills expressed through the Italian societal language among BLM children (L1-Chinese and L2-Italian) and their monolingual peers (L1-Italian), the results suggest that BLM children (L1-Chinese and L2-Italian) create oral narratives in L2 with fewer structural narrative elements (e.g., problems, attempts, and solution) than their monolingual peers. Previous studies of bilingual children with different languages and at different ages provided contrasting findings. In contrast to the results of this study, some studies on English language learners and English-monolingual preschoolers (e.g., Hipfner-Boucher et al., 2015) did not find differences in story grammar during a retell task. The results of our study agree partially with the results of Bonifacci et al. (2018), who showed that bilingual and monolingual preschoolers differ regarding settings and attempts in favour of monolinguals. The results of our study allow us to extend previous results obtained regarding preschoolers by providing evidence on BLM children in primary school. The story structure of BLM children that is set around the Level 2 ('sketch stories') gives information about a scarce use of high-level processes, such as idea generation and story planning compared with their monolingual peers, whose story structure is set around the Level 4 (see Appendix 1 for text examples). The comparison of narratives created by BLM and monolinguals did not show differences regarding oral text coherence. Reasonably, the low level of structure with fewer story character actions, attempts, and solutions minimises the possibilities of BLM children to commit incongruences through narration. In addition, the equal number of incoherent instances in the stories of BLM and monolinguals suggests a similar level of cognitive processes (e.g., executive functions) that support children in terms of assuring the mastery of logical and temporal relations. In addition, differences in text cohesion and word productivity in the stories of BLM and monolingual children were not found. Previous studies in the literature conducted among BLM preschoolers and their monolingual peers found differences on the various microstructure measures (number of different words, sentence length, and grammaticality), text cohesion, and linguistic and morphosyntactic elements (Bonifacci et al., 2018). The results obtained from school-age BLM children (L1-Chinese and L2-Italian) provide the opportunity to consider different explanations. Possibly, BLM children who create a story with the same number of words and (temporal and causal) linguistic connectives as their monolingual peers devote a great level of cognitive investment in recollecting the adequate words to be adopted in the story, detrimental to the overall planning of the story. This significant investment in finding adequate words and linguistic connectives denotes the BLM awareness that stories require both the usage of specific categories of fictional words linked to folk tales (e.g., fantastic creatures), action verbs, language of mind terms referring to characters' internal mental states, such as beliefs, desire, emotions (e.g., Pinto et al., 2016), and temporal and causal connectives to assure a logical-temporal line to the story plot. We attempt to explain the lack of differences in word productivity and text cohesion. The number of connectives and words provide quantitative information but are not indicative of the quality of the use of words and connectives. Words can only be used to describe, as in a list of daily routines. Connectives do not necessarily help to structure the story because they can only be additive (e.g., 'and then . . . then') and, therefore, do not affect the structural quality of the story.

However, the results of the comparison of textual processing scores showed that the rate of narrative speed was lower among BLM children compared with their monolingual peers. The more time spent on telling a story might indicate that L2 word processing in a narrative task demands high levels of cognitive and lexical processing for BLM children. This result could be related to the lower level of lexical skills found among Chinese BLM children compared with their Italian monolingual peers. Taking a longer time might help them retrieve from their mental lexicon words known to be used in narrative creation. Although scarce lexical skills can be overcome in an oral

narrative task, where children can freely choose the words to use, the narrative speed can suffer from a lack of mastering L2 lexical processing. The lower rate of narrative speed could be explained by their need to search words within a restricted lexical repertoire that minority language children have available, as well as by the need to search for the most suitable words for narrative creative purposes.

Continuing to examine the results of the first aim regarding the comparison of vocabulary skills expressed through the societal Italian language, the lexical competence of BLM children (L1-Chinese and L2-Italian) was lower in comparison with that of their monolingual peers. Difficulties in lexical comprehension are not equivalent to difficulties in lexical production. In fact, differently from lexical comprehension, in the text narrative production, children use their own lexical background, which they have mastered, perhaps as in the case of BLM taking a long time to search for appropriate terms but arriving at a linguistically adequate text. Lexical competence refers to the depth of vocabulary knowledge and the ability to define words through cognitive-linguistic processes (e.g., categorization based on perceptual and functional attributes, and the ability to construct synonyms and antonyms). Our results are consistent with other findings in the literature on the limited vocabulary of BLM preschoolers and school-age children, as well as with evidence from bilingual children raised in different language environments and showing weaker vocabulary skills than monolinguals (see Appendix 2). Our results contribute to the knowledge of the difficulties of the specific BLM population of school-age children who speak L1-Chinese and L2-Italian. There are several explanations for the limited vocabulary knowledge of BLM children from Chinese-speaking homes. It is important to consider that their disadvantage arises from a task that, in contrast to the major part of vocabulary tasks used in the literature (e.g., assessing the number of words known), measures the child's quality of the knowledge of the meaning of the words, such as whether the child knows the superordinate and subordinate category of the word, to which semantic category it belongs, what its uses or functions are, and the antonyms and synonyms of the words. Furthermore, children were assessed regarding their ability to define the contextually correct meanings of the words, that is, the meaning of the word in the linguistic context in which it is inserted.

Also, BLM children's lower performance in L2-Italian can be traced to the limited input derived from a more restricted number of interactions, less variety of L2 registers, and fewer L1-Italian speakers to communicate with daily. As suggested by the literature (Unsworth, 2016), bilingual language acquisition is affected by different but interrelated components (language amount, frequency, and quality) of bilingual children's language learning experience at home which may support our understanding of BLM children's lexical competence disadvantage. Monolingual Italian-speaking children benefit from continuous exposure to word meanings that are also transmitted at home through oral and written forms in newspapers, books, and daily chores such as shopping lists or personal notes. The lack of a repeated and continuous exposure limits BLM children in consolidating the linguistic label of words and word meaning in the semantic memory. According to Yule (2006), the lack of linguistic stimulation (which, one emitted, does not persist in the environment) can be obviated by the possibility of drawing activities and writing practices. However, this is difficult for the specific BLM population of school-age children who speak L1-Chinese and L2-Italian, because the two languages they use have profoundly different characteristics at the orthographic level: Chinese is a non-alphabetic language and Italian is an alphabetic language.

The second aim was to investigate the relationship between oral narrative and vocabulary skills among BLM children (L1-Chinese and L2-Italian) and their monolingual peers (L1-Italian). The results suggest the existence of a similar pattern among BLM children and their monolingual peers.

Lower levels of textual structure among BLM children compared with those among the monolinguals are associated with their lower vocabulary skills. Higher vocabulary skills among the monolingual Italian-speaking children are associated with higher levels of textual structure in their invented stories. The results of this study reinforce the close interplay between the linguistic conditions (BLM and monolingual) and the vocabulary skills and the competence of a story structure. In fact, the scarce narrative product regarding structure may be explained by the underlying difficulties of choosing words in L2, which could be associated with high-level processing (e.g., idea generation and text planning) in response to the high cognitive costs associated with coping with the poverty of the lexicon. This challenge for BLM children entails having to handle both the choosing of adequate words for the story in L2-Italian, while concurrently generating ideas and planning the structure of the story plot. This is consistent with the literature. Neither age nor SES was a significant predictor of oral narrative skills in the total sample. The lack of age effect on the oral narrative growth is presumably related to the fact that the activities with stories, both reception and production practices, are poorly simulated in primary school. The Italian school curriculum for primary school (see Eurydice, 2021) emphasised that the speaking needs to be considered in the implementation of daily primary school practices and activities. However, educational programmes predominantly focus on teaching writing rather than oral-based language activities (Kirkland & Patterson, 2005). Teachers are more inclined to focus on the oral language of children for evaluation purposes. In fact, the task of oral paraphrases is a common practice used to test children's comprehension of the lessons or content of the texts. SES influence on narratives (cf. Bernstein, 1971) in the total sample is an interesting and unexpected finding. As pointed out in the literature, narrative is a universal genre, and the storytelling practices in different cultures may contribute to explaining this stable result across SES among BLM and monolingual peers. Furthermore, we distinguish the economic status on the basis of educational level while we know that narratives are also present in non-literate groups and pre-literate societies as demonstrated by the examples of storytellers who dramatise events of daily life. Our data on BLM children would suggest a transfer of the knowledge they construct into everyday practice and the ability to construct stories through L2 not yet fully acquired. Future studies could further investigate the relationship between SES and the narrative skills of children using a composite score of SES, including the educational level and professional role of parents. Also, the homogeneity of the sample with respect to the length of stay in Italy does not allow us to assess the diversified effect of the different duration of exposure to the Italian language, which would merit further investigation.

Regarding enhancing the narrative competence of school-age children, future researchers should enlarge the codifying system to include a more in-depth story analysis based on lexical variety and morphosyntactic skills. Further investigations could also consider the integration of a measure of story cohesiveness that considers the total number of temporal and causal connectives used in integration with a measure indicating the effectiveness of the use of cohesiveness in stories. An important advancement would be to extend the analyses of the narratives of children in both the languages (e.g., L1-Chinese and L2-Italian) using both oral and written narrative tasks. One limitation of the BLM study is that it focused on oral narratives, whereas it would be interesting to verify interweaving with written narratives, knowing that the medium of communication significantly influences the product (Pinto, Tarchi, & Bigozzi, 2016).

To the best of our knowledge, ours is one of the few studies that compare oral narrative and vocabulary skills among BLM children speaking L1-Chinese and L2-Italian and their monolingual peers. The results are relevant in several countries and local areas with large immigrant settings. The specific focus on oral narrative and vocabulary skills was derived from a number of different studies that recognised the implications of these skills for later reading and writing skills. Narratives

are a text type in which BLM are competent and in which they are able to overcome their vocabulary deficiencies provided they are given enough time. BLM children benefit from the fact that narratives are a universal text on which they have developed knowledge in L1 that they transfer to L2. For teachers and school practitioners, it is important to know that time restrictions may negatively influence BLM writing performances. For BLM, it seems more useful to learn vocabulary through activities and tasks in which they feel competent to sustain their motivation and enjoyment through learning. Interventions aimed at improving school learning skills in BLM children through oral narratives could have the secondary benefit of also improving BLMs' positive self-image, relationships, and eventually access to better job opportunities (e.g., Lao, 2004). The understanding of specific difficulties among the L2-Italian proficiency of BLM children is crucial for researchers and school practitioners. Also, it is crucial for schools to design specific pedagogical actions and interventions to further ensure high teaching quality. The involvement of parents would be useful to sustain them in offering L2 home literacy opportunities. This would reduce the language gap between home and extra-familial contexts (e.g., Daller et al., 2011). As pointed out by Wright et al. (2000), these measures would help bilingual-minority children to benefit from learning opportunities in school.

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Appendix 1

Example 1: Oral narration produced by a BLM child [structure level 2; 3 minutes]

Once upon a time, a long time ago, a bunch of monsters wanted to take a princess and there was also a dragon. The monsters fought against the dragon and the battle was won by the monsters and the princess was taken to their kingdom.

Example 2: Oral narration produced by a monolingual child [structure level 4; 3 minutes]

Once upon a time there was a princess. She feels alone, she has no friends. So, she came out of the castle to search for someone that could be her friend. She found a pretty little cat. She returned home with her new friend, and they played together all day. And they lived happily ever after.

Appendix 2

Example 1: Vocabulary answers to the multiple-choice question from the Multidimensional Vocabulary Tasks (Boschi et al., 1996**) by BLM and monolingual children**

*The opposite of 'alone' is***:**
- lonely [the wrong answer provided by BLM children; tautology process]
- content
- distant
- accompanied [the correct answer provided by monolingual children; antonymic processes]