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Relations Among Narrative Lexical Diversity and Expressive/ Receptive Vocabulary of Young English Learners

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COLLEGE OF COMMUNICATION AND INFORMATION

RELATIONS AMONG NARRATIVE LEXICAL DIVERSITY

AND EXPRESSIVE/ RECEPTIVE VOCABULARY OF YOUNG ENGLISH LEARNERS

By

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Abstract

English learner students are a growing population within the United States public school system. These students are seen to consistently score lower on educational assessments compared to their English-speaking monolingual peers. However, many assessments tests used are standardized tests that were norm-referenced on an English-speaking monolingual population. Consequently, language differences are often considered language deficits due to a lack of understanding about language development among ELs. The purpose of this study was to learn more about the developmental patterns and relationships among ELs' narratives and vocabulary skills to ensure accurate assessment and academic success. Twelve Spanish-speaking ELs and nine English-speaking monolinguals in Kindergarten produced a narrative retell and received expressive/ receptive vocabulary scores. The number of different words (NDW) in the narrative samples was compared to all participants' English-only expressive/ receptive vocabulary and the ELs' conceptual expressive/ receptive vocabulary. The results revealed a significant relationship between NDW in the narratives and English-only expressive vocabulary. Further research would be beneficial to better understand the relationship between ELs' narratives and vocabulary skills to help support accurate assessments among ELs.

Introduction

The percentage of public school students in the United States who are English learners (ELs) has steadily increased over the past few years. According to the U.S. Department of Education (2015), English learners now comprise of nearly 10 percent of the total student population from Kindergarten to 12th grade. This number is expected to only continue to increase in the future. Between 2003 and 2013, the total EL student enrollment in the U.S. grew by about 60 percent; whereas the general student population grew by only 7 percent (Grantmakers for Education, 2013). Among all ELs, Spanish was the most commonly reported home language accounting for 77 percent of all EL students (National Center for Education Statistics, 2015).

When ELs enter the formal school system they face numerous challenges being placed in an English-only speaking classroom where they are expected to learn and interact in a language they are not yet proficient in. The achievement gaps between ELs and their monolingual peers have been documented by several studies and differences in language skills are often seen as the cause of this disparity across the two groups (Hoff, 2013; Genesee, Lindholm-Leary, Saunders, & Christian, 2005; Morrison, Bachman, & Connor, 2005; Páez, Tabors, & López, 2007). One study tested EL and non-EL students in different subjects and found that the performance between the two groups of students broadened as the language demands required for the test increased (Abedi, Leon, & Mirocha, 2003). This implies that ELs may lag behind their peers in school not necessarily because they have language or cognitive deficits, but rather because the assessment tools are biased and are not taking into account the complexity of learning a second language.

Educational assessments help measure a student's academic achievement in regards to

different subject areas. These tests play an important role in the academic careers of EL students because the outcomes are used for "classification, reclassification, promotion, and graduation" of these students (Abedi & Levine, 2013). The reason these tests are used to make such crucial decisions is because these tests are considered to be standardized, meaning the content and test conditions are consistent among all test takers (Sireci & Faulkner-Bond, 2015). The use of standardized tests was created to provide objective information, which should provide reliable and valid information about a student's achievement levels. However, the majority of these tests were designed for and norm referenced by an English-speaking monolingual population (Oller & Damico, 1991). The main problem that stems from this is that many EL students are being inappropriately placed in special education and remedial programs due to their low scores on assessments (Rhodes, Ochoa, Ortiz, 2005). Even if a test is attempting to assess a child's achievement in a certain subject unrelated to language, any test that employs language can be considered a measurement of one's language skills (Sireci & Faulkner-Bond, 2015). As a result, standardized tests may not produce reliable results because the expectations of the test takers' language proficiency are rarely met when working with ELs.

The ability to speak two languages is a complex process that requires an individual to combine two linguistic histories and patterns (Oller &Damico, 1991). The ability to acquire a second language is also influenced by the individual's language learning abilities, time of exposure, and opportunities to practice the new language (Rhodes, Ochoa, Ortiz, 2005). Linguistic differences are also associated with different cultural experiences, which may also affect a student's cognitive and academic development (Oller &Damico, 1991). Therefore, in order for valid assessment of ELs to occur academic performance must be compared to the performance of other students with similar cultural and linguistic backgrounds as well as

consider an EL's knowledge in both languages.

Narrative Assessments

Measures of language sampling and language tests may provide a more valid assessment than standardized tests for culturally and linguistically diverse populations (Gutierrez-Clellen, Pena, & Quinn, 1995). This is due to the fact that oral narratives are less biased than standardized tests because narratives are a universal form of communication used by all in daily life and by people from all cultures (Gutierrez-Clellen, Pena, & Quinn, 1995, Gutierrez-Clellen & Quinn, 1993). They may also provide more information about a child's current language skills by providing a less rigid structure compared to standardized tests (Fiestas & Peña, 2004). Therefore, oral narratives can help teachers and professionals to better understand the typical language patterns seen among young English learners by taking into account cultural and linguistic differences.

A student's narrative skills are also considered to play an important role in their academic success. Narrative abilities are not only a key component of the school curriculum but also contribute to create the skills that will support future literacy progress (Hemphill & Snow, 1996). Recent studies have found a positive correlation between narrative skills and reading comprehension in bilingual English/Spanish students (Miller et al., 2006; Uccelli & Páez, 2007). Pearson (2002) compared the narrative performances of second and fifth grade Spanish/ English bilinguals and monolinguals using Frog, Where Are You? (Mayer, 1969). The study found significant differences in the microstructure components between the two groups, but not in the macrostructure components. In particular, number of different words (NDW) in a narrative sample is of great interest because it is associated with a child's vocabulary skills, which also plays an important part in a child's academic success.

Vocabulary Assessments

Vocabulary is the foundation of language and is present in all forms of communication. Expressive vocabulary refers to the language one is able to produce and receptive vocabulary refers to the language one is able to comprehend. Throughout one's academic career, expressive and receptive vocabulary skills play a large role in learning because it directly affects a student's ability to express their thoughts and knowledge in oral and written evaluations (Millet, Atwill, Blanchard, & Gorin, 2008). School activities also require a frequent use of vocabulary knowledge to communicate with peers and teachers. Consequently, accurate vocabulary measures of bilingual students are an essential assessment tool to ensure success in the classroom (Abedi & Dietel, 2004; Abedi, Hoffstetter and Lord, 2004) Therefore, both receptive and expressive vocabulary should be measured in order to obtain a reliable vocabulary assessment.

The results of several research studies have shown that bilingual children have significantly lower vocabulary scores compared to monolinguals that persist throughout an EL's school years (Ucelli & Paez, 2007). Although it is expected to find a limited English vocabulary in ELs than in children with English as their first language, that does not imply that ELs have a smaller vocabulary compared to their peers. Conceptual scoring, which includes vocabulary knowledge in both the first and the second language has been suggested as a more accurate measure of bilingual vocabulary assessment (Gross, 2014).

ELs have a fairly large lexicon that contains words in both their first language and in English that was acquired by being exposed to different settings. This results in a "singlet" lexical knowledge where ELs learn words relative to the context they learned them in (Deuchar & Quay, 2000). It is often seen that an EL will know a word in their first language and not in English, and vice versa. A child who speaks Spanish at home and English in the classroom may

know words relevant to the environment in which they are used. For example, an English learner child may know the Spanish word for "oven" *horno*, but not know it in English. Similarly, the child may know the word "desk" but not its Spanish equivalent, *escritorio*. Therefore, measuring a bilingual student's vocabulary only in English will negatively affect their vocabulary assessment because they are not able to express their complete vocabulary knowledge (Oller et al., 2007). A vocabulary study of monolinguals, simultaneous bilinguals, and sequential bilinguals, showed that the use of conceptual scoring significantly improved the vocabulary scores of bilingual students (Kuo and Anderson, 2006).

Purpose

It is important to study typical developmental trajectories and patterns among ELs' language development in order to ensure accurate assessment and academic success. This study proposes to explore the relationship between narrative samples and vocabulary test results of Spanish-speaking ELs and English-speaking monolinguals. Particular attention was given to the number of different words (NDW) in the narrative samples due to its close association with vocabulary. The Receptive One Word Picture Vocabulary Test (ROWPVT-4: SBE) and the Expressive One Word Picture Vocabulary Test (EOWPVT-4: SBE) scores were compared to narrative microstructure component, number of different words.

1) Among Spanish-speaking ELs and English-speaking monolinguals, what is the relationship between the number of different words (NDW) in a narrative sample and their English-only expressive/ receptive vocabulary score?

2) Among Spanish-speaking ELs, what is the relationship between the NDW in a narrative sample and their conceptual expressive/ receptive vocabulary score?

Method

Participants

This study included a total of 21 participants: 12 Spanish-speaking English learners and 9 English-speaking monolinguals. To be eligible to participate in the study, each participant had to be enrolled in Kindergarten**.** The monolingual children's first language was English and they came from an English-speaking background according to parent report. The ELs' first language was Spanish and they came from a Spanish-speaking background according to parent report. The parent of each child was required to sign a consent form allowing their child to take part in the study. Participants were recruited from elementary schools in North Florida. The study protocol was reviewed and approved by the Florida State Human Subjects Committee.

Materials

The materials included in this study were the book, *Frog, Where Are You?* (Mayer, 1969), a recording device, the Expressive One-Word Picture Vocabulary Test Spanish-Bilingual edition (EOWPVT-4 SBE; Brownell, 2012), and the Receptive One-Word Picture Vocabulary Test Spanish- Bilingual edition (ROWPVT-4 SBE; Brownell, 2012). *Frog, Where Are You?* is a wordless picture book that follows the adventure of a young boy who lost his pet frog. The EOWPVT-4 was used to measure English-only expressive vocabulary for all participants and conceptual expressive vocabulary for the ELs. The ROWPVT-4 was used to measure English-only receptive vocabulary for all participants and conceptual receptive vocabulary for the ELs. Both tests were designed to obtain either English-only or conceptual vocabulary scores. English-only scoring allows correct responses only in English and conceptual scoring allows correct responses in either English or in Spanish.

Procedure

Each participant was required to complete a battery of language assessments. The research team, which was supervised by a licensed speech-language pathologist, traveled to the children's school where they administered the assessment tests in a quiet classroom. Each child was asked to produce a narrative retell sample based on the story, *Frog, Where Are You?* (Mayer, 1969) and to complete vocabulary tests, the EOWPVT-4 SBE, and the ROWPVT-4 SBE.

Participants were administered the narrative *Frog, Where Are You?* by a trained research assistant (RA). The RA read the story to the child from a script while sharing the picture book, and then elicited a narrative retell from the child using a standardized script recommended by Miller and Iglesias (2012). Children's responses were recorded on cellular phones.

The participants were also administered the EOWPVT-4 and the ROWPVT-4 to assess their expressive and receptive vocabularies. Both tests were administered to each participant in English until a basal and ceiling was reached. For the EL group, after they had completed the test in English, the RA went back and tested each incorrect response in Spanish to acquire the child's conceptual vocabulary score. The RA continued until the new conceptual vocabulary ceiling was reached. Each monolingual child obtained an English-only expressive score and an English-only receptive score. Each EL child obtained an English-only expressive score, an English-only receptive score, a conceptual expressive score, and a conceptual receptive score. The mean scores of the English-only and conceptual EOWPVT-4 and ROWPVT-4 scores among the ELs and the English-speaking monolinguals were determined.

Analysis

Each narrative was transcribed using standard conventions of the software program Systematic Analysis of Language Transcripts (SALT; Miller & Iglesias, 2012). The primary investigator completed training with a trained, SALT-proficient speech-language pathologist (SLP) to reach 90 percent reliability with audio transcription and c-unit segmentation using practice audio files of children's narratives. After training was complete, each participant's narrative was transcribed from an audio file to an orthographic transcript. Afterwards, the researcher segmented the narrative samples into c-units and coded for bound morphemes. At this point, six narratives were randomly chosen and re-transcribed by a second SALT-proficient SLP to determine reliability. They obtained 100% reliability for c-unit segmentation and 98.05% reliability for morpheme segmentation. The transcripts were further analyzed to determine the total number of words (TNW), the mean length of utterance in words (MLU-w), the number of total utterances (NTU), and the number of different words (NDW). The mean scores of the ELs and the English-speaking monolinguals TNW, MLU-w, NTU, and NDW scores were determined.

The statistical analyses software, SPSS (IBM Corp, 2013), was used to examine the relationships between the narrative microstructure components and the vocabulary scores. In order to address the first research question, the correlations between NDW and the English-only EOWPVT-4 and ROWPVT-4 scores were found. To address the second research question, the correlations between NDW and the ELs' conceptual EOWPVT-4 and ROWPVT-4 scores were found.

Results

Descriptive Statistics

Descriptive statistics for each of the variables of interest were found to examine

participants' overall performance on the measures used in the study. The average scores of the

narrative microstructure components are summarized in Table 1. The average vocabulary scores

on the Expressive One Word Picture Vocabulary Test, 4th Ed., Spanish-Bilingual Edition

(EOWPVT-4 SBE) and the Receptive One Word Picture Vocabulary Test, 4th Ed., Spanish-

Bilingual Edition (ROWPVT-4 SBE) are summarized in Table 2.

Table 1. Average Narrative Microstructure Components

	ELs		Monolinguals	
	Mean	**SD**	**Mean**	**SD**
NTW	71.5	78.00	119.22	57.4
TNU	11.5	10.28	19.11	9.98
MLU-w	4.99	2.19	6.48	1.17
NDW	30.92	25.27	54.44	19.48

Note: NTW refers to number of total words, TNU refers to total number of utterances, MLU-w refers to mean length of utterance in words, and NDW refers to number of different words.

The table above shows the mean narrative microstructure components of all participants.

The monolinguals produced noticeably more language compared to their EL peers on all

microstructure measures. Importantly, the ELs exhibited greater variability in their language

production compared to the English-speaking monolinguals as depicted by the large standard

deviations. Because of the overall wide variability in narrative productivity within the EL and

monolingual groups, only NDW emerged as significantly different between the two groups, $t(19)$

$= -2.41$, $p = 0.26$. The monolingual children produced significantly more different words in the

narrative samples than the ELs. The differences between the groups for NTW, TNU, and MLU-w were not statistically significant.

Table 2. Average English-only and Conceptual EOWPVT-4 and ROWPVT-4 Scores

	ELs		Monolinguals	
	Mean	SD	Mean	SD
English-only Expressive Vocabulary	98.18	15.16	111.33	17.49
Conceptual Expressive Vocabulary	113.18	7.96	111.33	17.49
English-only Receptive Vocabulary	96.82	9.79	98.67	8.04
Conceptual Receptive Vocabulary	106.82	8.76	98.67	8.04

The table above shows the average mean vocabulary scores of all participants. The English-speaking monolinguals had higher English-only mean vocabulary scores compared to the ELs. The mean for English-only expressive vocabulary for the ELs was below the normative average of 100 but within the average range and the English-speaking monolinguals had a mean score above the average. In regard to the mean English-only receptive vocabulary, both groups were below the normative average of 100. However, the ELs' conceptual expressive and receptive mean vocabulary scores were higher than their English-speaking monolingual peers' and both vocabulary scores were above the normative average.

Figure 1. Average Narrative Microstructure Components
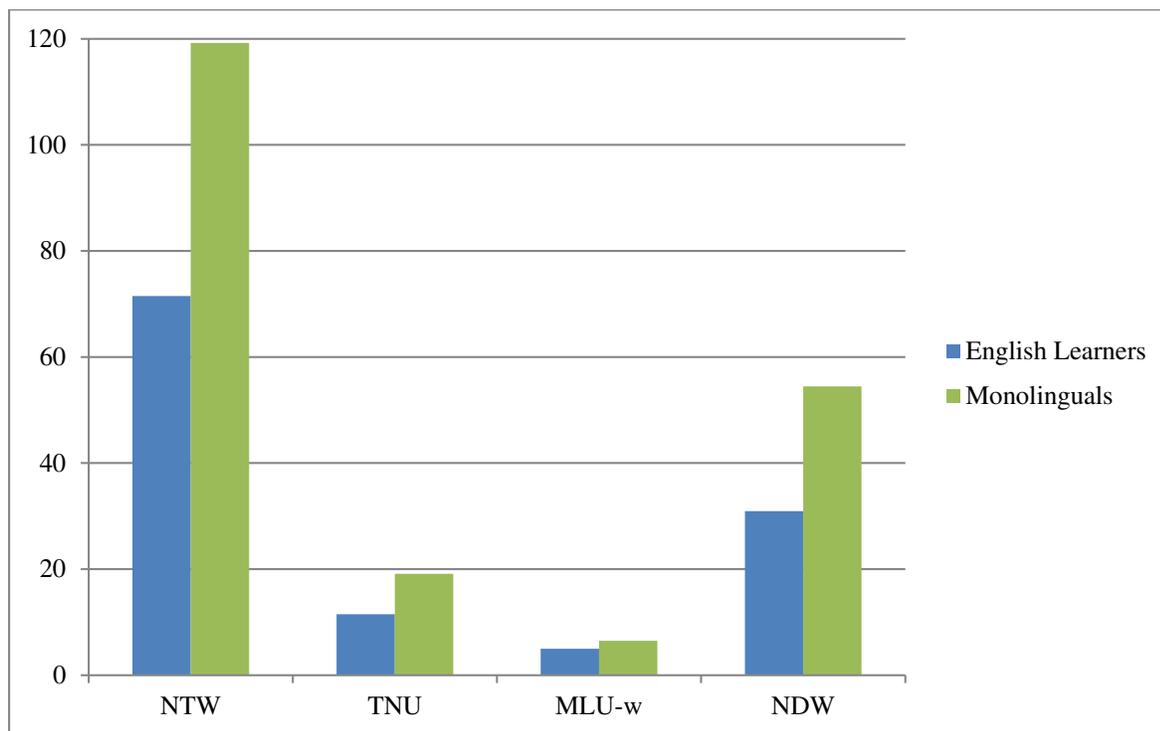
Figure 2. Average English-only and Conceptual Expressive/Receptive Vocabulary Scores
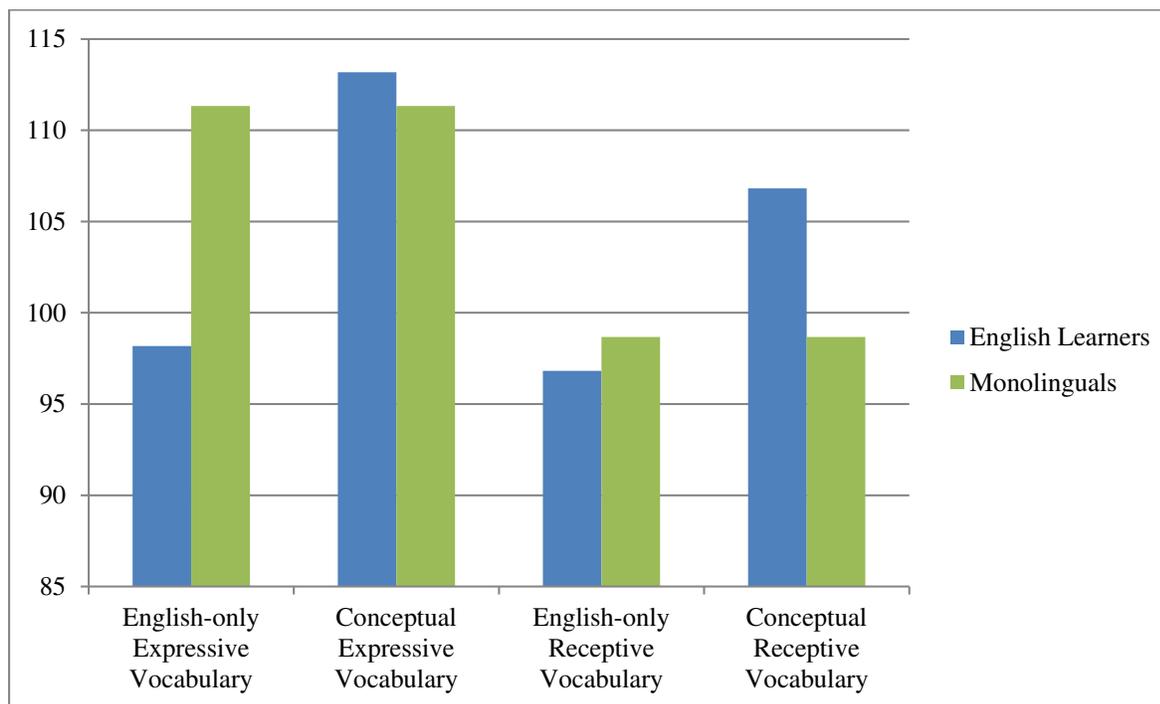
Correlations

Figure 3. Correlations of Narrative Microstructure Components with the EOWPVT-4 and ROWPVT-4 Scores

|	NTW	TNU	MLUw	NDW	English-only Expressive Vocabulary	Conceptual Expressive Vocabulary	English-only Receptive Vocabulary	Conceptual Receptive Vocabulary
NTW	1	.978**	.541*	.960**	.599*	.414	.167	-.124
TNU		1	.451*	.950**	.516*	.364	.252	-.064
MLUw			1	.620**	.620**	.371	.252	-.064
NDW				1	.640**	.507	.117	-.134
English-only Expressive Vocabulary					1	.630*	.561*	.278 .
Conceptual Expressive Vocabulary						1	.314	.275
English-only Receptive Vocabulary							1	.693*
Conceptual Receptive Vocabulary								1

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

  To answer the first research question, the correlations between the number of different words produced in the narrative samples and the English-only vocabulary scores were examined for the full sample of participants. There was a significant, positive correlation between NDW and English-only expressive vocabulary scores ($r = .640$, $p = .006$). This positive relationship is depicted in Figure 4. The correlation between NDW and English-only receptive vocabulary, however, was not significant ($r = .117$, $p = .655$).

To answer the second research question, the correlations between NDW and the ELs' conceptual vocabulary scores were examined. No significant relation was found between NDW and conceptual expressive vocabulary ($r = .507$, $p = .111$), or between NDW and conceptual receptive vocabulary ($r = -.134$, $p = .678$) within the EL sample. However, given the small sample size (n = 12) and positive relation depicted in the scatterplot (see Figure 5), it is possible that the study simply did not have adequate power to detect a true relation between NDW and conceptual expressive vocabulary for the ELs. Additional research is needed to reach a stronger conclusion.

Figure 4. Correlation between NDW and English-only Expressive Vocabulary
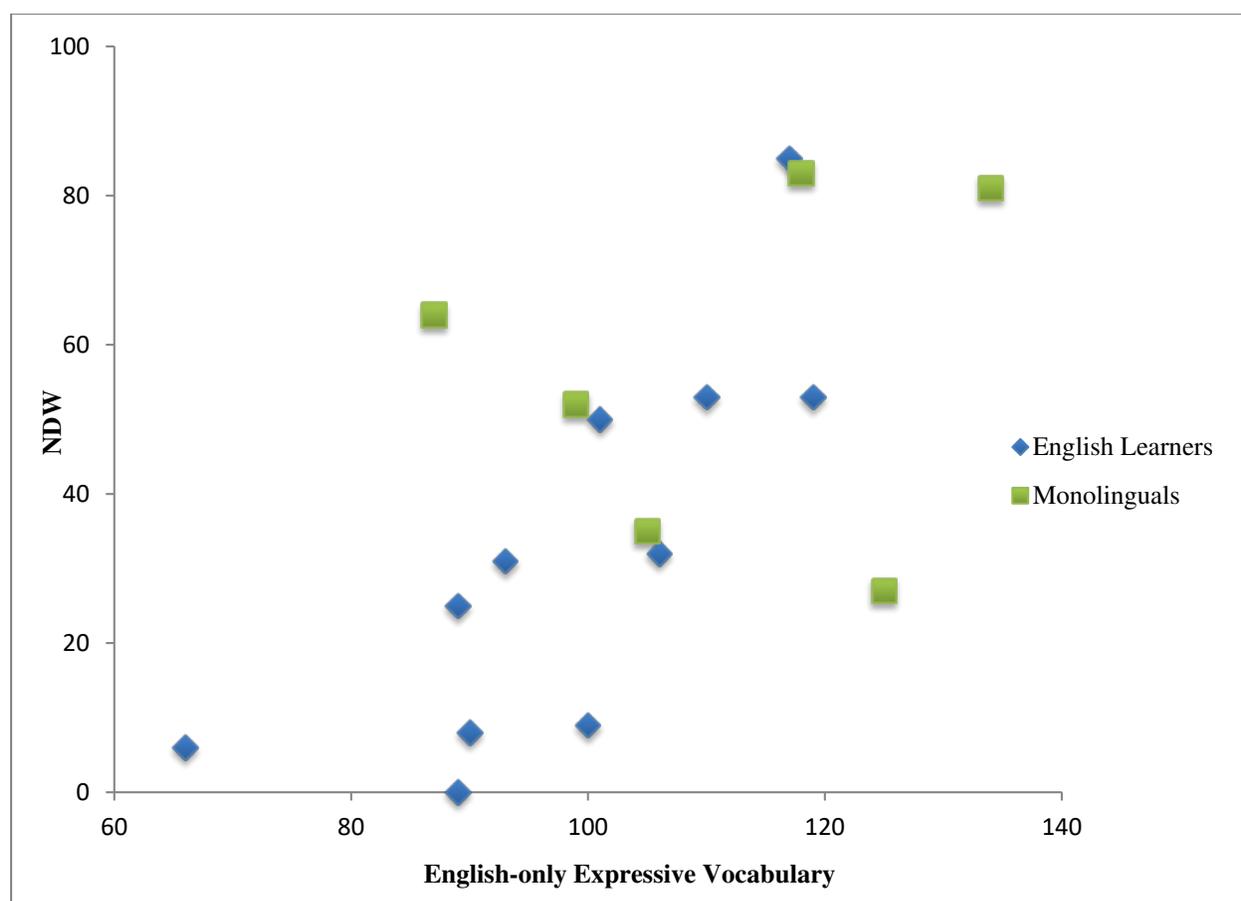
Figure 5. Correlation between NDW and Conceptual Expressive Vocabulary
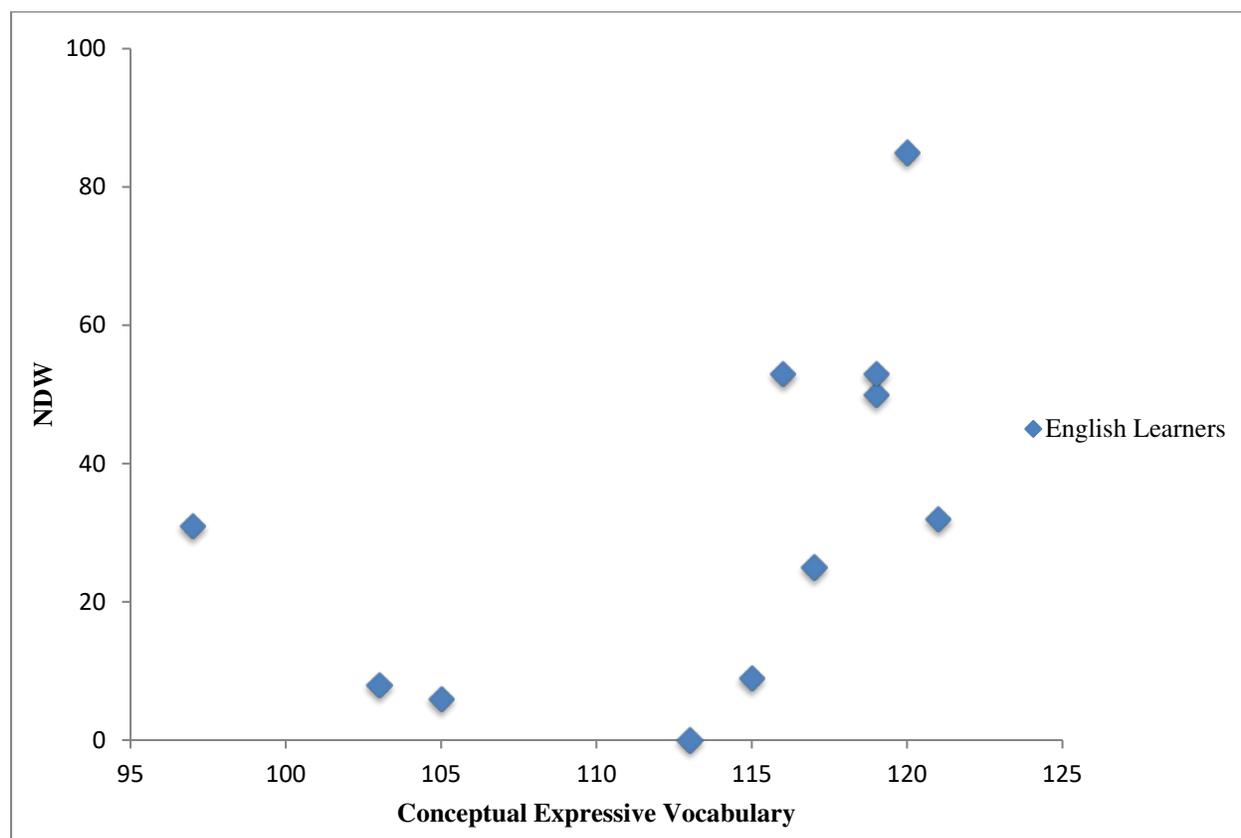
Discussion

The purpose of this study was to learn more about the developmental patterns and relationships between narrative retells and vocabulary tests among young English learners and their English-speaking monolingual peers. The subjects in the study, twelve Spanish-speaking ELs and nine English-speaking monolinguals, produced a narrative retell sample based on the story *Frog, Where Are You?* and completed the EOWPVT-4 and the ROWPVT-4.

The results showed that the English-speaking monolinguals had higher mean scores than the ELs across all narrative microstructure components (TNW, TNU, MLU-w, and NDW). Since the monolingual group has most likely had more exposure to the English language it was

expected to see them use more complex language than the ELs. However, only the number of different words (NDW) in the narrative samples was significantly different between the two groups. There were no significant differences between the measures of narrative productivity among the ELs and the English speaking monolinguals. Therefore, the vocabulary production in the narrative retells between the two groups was the largest differentiating component. It was also found that the English-speaking monolinguals had higher English-only expressive and receptive vocabulary means compared to the ELs. When large discrepancies exist between English vocabulary scores of ELs and their monolinguals peers it is a problem to be addressed in the ELs' early school years because it can lead to future problems with literacy or reading comprehension (Uccelli & Paez, 2007).

However, it is not surprising that an EL's single-language scores are lower than their monolingual peers because an EL's vocabulary knowledge is distributed across two languages and a single-language assessment only tests part of that knowledge (Oller & Pearson, 2002). Importantly, the ELs did have higher conceptual expressive and receptive vocabulary means compared to the English-speaking monolinguals. Therefore, the ELs' exhibited higher scores when their full vocabulary knowledge in both languages was taken into account. These findings support Pearson et al. (1993) who found that testing ELs' conceptual vocabulary raised their vocabulary scores to reach the level of their monolingual peers. It is possible that the English-only vocabulary differences we saw between the ELs and the English-speaking monolinguals in this study are due to the fact that the ELs are still in the process of learning a second language and is not the result of a language deficit. However, it would be a matter of concern if low scores across languages were found. Overall, it is important to test an EL's conceptual language skills, which may provide a more accurate assessment of their vocabulary skills.

The results also showed a positive correlation between NDW and the English-only expressive vocabulary scores. Children who had a higher NDW in their narratives had a higher English-only expressive vocabulary score. This is not surprising because both a narrative retell and the EOWPVT-4 are measures of English expressive language. Due to the close association between NDW and vocabulary, it seems that the NDW produced in a narrative may provide insight into a child's English-only expressive vocabulary skills. These results are consistent with Uccelli and Paez (2007) who found a moderate, positive relationship between English vocabulary and narrative skills of young bilingual children.

In comparison, there was no relationship between NDW and the ELs' conceptual expressive vocabulary. Even though NDW and conceptual expressive vocabulary are both measures of expressive language, it seems that the addition of Spanish vocabulary influenced the possible relationship. The lack of relationship between NDW and English-only and conceptual receptive vocabulary further reinforces that a narrative retell is more telling of expressive language skills than receptive language skills.

Limitations

It is important to recognize the limitations of the study to have a full understanding of the findings. The study consisted of a small number of participants and the results may not be generalizable to the whole population of ELs and English-speaking monolinguals. The majority of participants were also from families who reported being from low social economic backgrounds. Therefore, the participants in the study were not representative of the entire population of ELs and English-speaking monolinguals. The findings could also be affected by the individual differences the RAs made when eliciting the narrative retell from the participants. Although each RA was given specific training and a prompt to use, after transcribing the

narratives, it was found that a few children received more prompting than others. This inconsistency among narrative elicitation could have slightly skewed the narrative results.

Clinical Implications

Despite the limitations observed in the present study, the findings support a relationship between the number of different words (NDW) in a narrative sample and a child's English-only expressive vocabulary. This relationship may have clinical implications since it is likely that assessments measuring similar parameters exhibit some type of relationship. If there is a discrepancy between two similar language measures there may be an underlying problem in the child's language skills. The results also showed that a single-language assessment could be an underrepresentation of ELs' vocabulary knowledge and could lead to the over-identification of speech and language services. Further research would be beneficial to examine the relationships between ELs' and English-speaking monolinguals' narrative and vocabulary skills to support accurate language assessments.

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