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A Comparative Study on the Expository Writing Abilities of Kindergarten Students
With and Without Developmental Language Disorder

Kristine Michelle Dayley Andrus

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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ABSTRACT

A Comparative Study on the Expository Writing Abilities of Kindergarten Students With and Without Developmental Language Disorder

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Master of Science

State standards require kindergarten students to produce expository writing, but little research has been done regarding their abilities in this area. This study describes expository writing samples of 47 typically developing (TD) kindergarteners and 43 kindergarteners with developmental language disorder (DLD). The *Expository Language Measures (ELM) Flow Chart* and the Systematic Analysis of Language Transcripts (SALT) software were used to detail the language complexity and text structure features the children in the sample produced. When comparing TD and DLD children's expository written samples, no significant differences in the language and text structure measures were found. It is important to continue acquiring data regarding young children's abilities to produce expository written language. Identifying norms and areas of weakness promotes the creation of more specific and effective teaching and intervention methods.

Keywords: expository language, writing, kindergarten, typically developing, developmental language disorder

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DESCRIPTION OF THESIS STRUCTURE AND CONTENT

This thesis, *A Comparative Study on the Expository Writing Abilities of Kindergarten Students With and Without Developmental Language Disorder*, is formatted in a using a blend of traditional thesis requirements with journal publication formats. The preliminary pages of the thesis reflect requirements for submission to the university. The body of the thesis adheres to length and style requirements befitting submission to speech and language journals.

The annotated bibliography is included in Appendix A. Appendix B contains the *Expository Language Measures (ELM) Flow Chart*.

Introduction

In 2016, the American Speech-Language-Hearing Association (ASHA) identified writing as an important component of language impairment intervention, as detailed in the scope of practice in speech-language pathology document (ASHA, 2016). Prior to this, a position statement made in 2001 by an ad hoc ASHA committee detailed the “Roles and Responsibilities of Speech-Language Pathologists with Respect to Reading and Writing in Children and Adolescents.” The document states that speech and language pathologists (SLP) play a “critical and direct role” in a child’s development of literacy (ASHA, 2001, para. 1). There is a significant correlation between spoken language, reading, and writing; they contribute to a general language and literacy competence. If an individual has difficulty with one, they likely have difficulties with all three. Improvement in one domain can result in growth in another (ASHA, 2001). The position statement also asserts that the underlying connections of these language domains “necessitate that intervention for language disorders target written as well as spoken language needs” (ASHA, 2001, para. 3). Furthermore, it declares that SLPs are fully qualified to provide these services.

Fallon and Katz (2011) found that more than 1/3 of school based SLPs are not providing any written language services to their students with language impairments. In their study, they found that a large portion of SLPs do not feel they have adequate knowledge and training on providing written language services. Only 20% of SLPs reported providing written language services for 100% of the children on their caseloads who had written language needs (Fallon & Katz, 2011). The numbers were especially low regarding knowledge about teaching expository writing, even though expository oral and written language are essential for academic success.

Curriculum standards such as the Common Core State Standards (CCSS), also focus on written language (National Governors Association Center for Best Practices, Council of Chief State School Officers [NGA], 2010). The Common Core is designed to prepare students for college and career readiness by instituting core concepts and procedures in early grades. Doing this allows sufficient time for mastery by the end of public education (NGA, 2010).

Consequently, with the institution of the CCSS, complex language, including narrative and expository written discourse, are emphasized at an early age. Expository discourse, in particular, has increased in prominence across the grade levels (Lundine, 2020). In fact, for older students, expository writing is emphasized in the curriculum and in high stakes testing more so than any other written language discourse (Hall-Mills & Apel, 2015). To prepare for this future high level of demand, expository written language is given equal emphasis to narrative written language in the kindergarten curriculum, despite its advanced components (NGA, 2010). Standard ELA WK2 indicates that kindergarten children should “use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.” (para. 2). Another standard, ELA WK7, states that kindergarteners should “participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them)” (NGA, 2010, para. 7).

Expository Discourse

Expository language is a type of oral or written discourse which has the primary purpose of describing, instructing, expounding, and/or ‘exposing’ a given topic (Nippold et al., 2005). Expository discourse includes non-fiction texts such as documentaries, classroom texts, and technical papers (Lundine & McCauley, 2016). It is sometimes referred to as the “language of

the curriculum” (Ward-Lonergan & Duthie, 2016). Expository discourse requires the use of complex, academic language more so than other forms of discourse. Specifically, expository discourse requires increased lexical, syntactical, and macrostructural abilities (Berman & Nir-Sagiv, 2007; Koutsoftas & Gray, 2012; Scott & Windsor, 2000). For example, increased lexical demands include highly technical vocabulary. The syntactic structure of expository texts uses more nominalization, pronominalization, and pre- and post-modification of nouns as well as subordination of clauses (i.e., nominal, relative, and adverbial). Furthermore, expository macrostructure is increasingly complex as it varies according to the subtype and purpose of the exposition. With six main subtypes of expository texts—descriptive, procedural, enumerative, cause/effect, compare/contrast, and problem/solution—flexibility and judgement are needed to complete the intended purpose of an exposition (Berman & Nir-Sagiv, 2007; Lundine & McCauley, 2016).

Because of the increased requirement of lexical and syntactical demands of expository discourse, it has been found to be more cognitively difficult to both produce and comprehend across ages and developmental levels compared to other types of discourse (Culatta et al., 2010; Lundine et al., 2018). Specifically, Berman and Nir-Sagiv (2007) concluded that the “top-down, topic-motivated global-level text construction” of expository discourse often requires a higher cognitive demand to comprehend and produce than the bottom-up organization of narrative discourse because expository discourse involves relating abstract concepts to more concrete and applicable categories (Berman & Nir-Sagiv, 2007). This is supported by the finding that expository text requires greater processing and memory of unfamiliar content than when reading the same content in narrative (Wolfe & Woodwyk, 2010). Furthermore, cognition was found to be a significant predictor of the ability to summarize expository texts. In contrast, cognition was

not a predictor for narrative summarization (Lundine et al., 2018). The increased cognitive demand to both produce and comprehend expository discourse has incentivized researchers to investigate and describe the typical features present in individuals of differing ages and cognitive abilities.

Multiple studies with older typically developing students have examined the complex language structures frequently evident in expository writing (Donovan & Smolkin, 2002; Kim et al., 2015b; Hall-Mills & Apel, 2015; Westerveld & Moran, 2011). The following table (Table 1) illustrates the elements frequently used to assess written language competency.

Table 1

Language Complexity Features Assessed in Expository Writing of Older Typically Developing Students

Study	Total T Units	MLTU	TNW	WPM	Subordinate clause types	Clauses per sentence	Clausal density	Grammatical accuracy	PDSE	Organization and Flow	Content
Westerveld and Moran (2011)	X	X		X			X	X	X		
Hall-Mills and Apel (2015)	X	X	X			X	X	X		X	
Donovan and Smolkin (2002)	X				X					X	X
Gatlin et.al. (2015)			X							X	X
Berman and Nir- Sagiv (2007)	X	X			X		X			X	X

Note. MLTU = mean length of t-unit. TNW = total number of words. WPM = words per minute. PDSE = proportion of different spelling errors.

This table reveals the extent to which these researchers have focused on older students to characterize expository writing organization, production, and complexity. Such information, however, is not currently available for younger students. This lack of information is not due to young children's inability to produce expository discourse. Westerveld and Moran (2011) found that children (ages 6-7) are capable of orally producing expository discourse. Additionally, Donovan and Smolkin (2002) documented kindergarteners' ability to not only create simple oral and written expository passages, but also express understanding that there are differences between narrative and expository writing. Moreover, Culatta et al. (2010) conducted a 16-week pilot study teaching expository comprehension skills to preschoolers. Results showed that preschool-aged children can successfully learn about and perform tasks related to expository language, concepts, and organization. The lack of information about young children's writing is impacted by the bulk of researchers focusing on writing automaticity, orthographic abilities, and/or spelling in that population (Cabell et al., 2009; Kim et al., 2014; Pavelko et al., 2018; Werfel & Schuelea, 2012), rather than the more complete picture that oral, written, and pictorial expression gives of a child's language abilities when these methods are combined. Watanabe and Hall-Kenyon (2011) noted that young students with emerging writing abilities not only rely on oral language, but also pictures to supplement their writing and that an analysis of pictures provides further evidence of organization, production, and complexity. There is a need to gather more information on text structure and language complexity reflected in text and pictorial depiction expressed in the expository writing of young students.

Developmental Language Disorder

Because expository discourse includes increased lexical, syntactical, and macrostructural complexity, it reveals language impairments in children with developmental language disorder

(DLD; Gillam & Johnston, 1992; Hall-Kenyon & Culatta, 2010; Koutsoftas & Gray, 2012; Mackie & Dockrell, 2004; Nippold et al., 2008; Scott & Windsor, 2000; Windsor et al., 2000). Children with language disorders score significantly lower on some expository writing tasks than typically developing (TD) children (Koutsoftas & Gray, 2012; Scott & Windsor, 2000).

For example, Scott and Windsor (2000) evaluated the effectiveness of ten general language performance measures in discerning children with DLD from chronological-age (CA) and language-age (LA) peers. In the study, 60 children ages 8;11-11;6 summarized two educational videotapes (i.e., one expository, one narrative) verbally and through writing. Results of the study revealed that total T-units, total words, and words per minute were significantly lower for children with DLDs than for CA peers. Additionally, children with DLD had significantly lower grammatical complexity than both CA and LA peers as measured by words per T-unit. Percent T-units with mazes and number of different words were not different across the groups.

Koutsoftas and Gray (2012) investigated how the written language difficulties of fourth and fifth grade students with DLD affect their performance on high stakes standardized tests (e.g., tests required by the No Child Left Behind Act, 2002) compared to typically developing peers. Expository writing samples of TD and DLD children were scored with analytic writing measures typically used in research (i.e., productivity, semantic use, grammaticality, sentence complexity, and a measure of spelling accuracy) as well as with the six traits writing rubric (STWR) that is often used in high stakes assessments. For expository writing, the TD group outperformed the DLD group on three analytic measures (i.e., number of different words [NDW], grammatical errors per T-unit [EPT], and proportion of different spelling errors [PDSE])

and all 6 STWR traits (i.e., ideas and content, organization, voice, word choice, sentence fluency, and conventions). See Table 2 for a summary.

Table 2

Language Complexity Features Assessed in Expository Writing of Students With Developmental Language Disorder

	Studies	
	Koutsoftas & Gray (2012)	Scott & Windsor (2000)
Total T- units		X *
MLTU		X
Errors per T-unit	X *	X * ^a
TNW	X	X *
NDW	X *	X
WPM		X *
Clausal density	X	X
Grammatical accuracy		X
PDSE	X *	
Organization and Flow	X *	

Note. MLTU = mean length of T-unit. TNW = total number of words. NDW =

number of different words. WPM = words per minute. PDSE = proportion of different spelling errors.

*Sensitive to DLD vs. TD

^a Only measure in the study to significantly differentiate between Language Age and Chronological Age peers.

These two studies highlight significant differences in productivity, organization, and grammatical accuracy between TD and DLD children. Therefore, it is important to have

descriptive data specific to this population which can be used to promote early identification and intervention for future writing/reading difficulties (Kim et al., 2014).

Current Study

More data are needed to describe young children's expository writing abilities. This information, similar to what is reported in previous research with older students, should highlight those features that best differentiate young students with and without a language disorder. These descriptive data can be an important tool to aid SLPs in deciding whether children are developing expository written language as expected. Accumulating developmental information on expository writing can provide insight as to what areas children with DLD tend to struggle with compared to their TD peers. In addition, this information would promote and inform early identification and intervention of future writing/reading difficulties (Kim et al., 2014). Therefore, the purpose of this study is to describe the written expository text structure, language complexity, and grammatical errors of kindergarten students with and without a language disorder and to determine whether there is a statistically significant difference across those measures between those groups of students. The research questions are as follows:

1. What are the text structures and language complexity features produced in expository writing by kindergarten students with and without language disorders?
2. Is there a significant difference between the text structures and language complexity features produced in expository writing by kindergarten students with and without language disorders?

Method

Participants

As the current study involved human participants, approval was obtained from the Institutional Review Board in the collection of all the data used. Participants were drawn from 620 typically developing kindergarten students and 66 students with DLD in 28 kindergarten classrooms from four school districts in the same geographic region (upper Midwest). For the purposes of this study, children were identified as having DLD if they had a current Individualized Education Program (IEP) and were receiving language intervention services. Those 66 students with DLD were matched to 66 students with typical language across school location (school and district), gender, free/reduced lunch, ethnicity/race, and dominant language. There were 52/66 (78.8%) exact matches across all identifiers in the sample. The following modified samples were matched across all identifiers except those explicitly listed for the remaining students: 9/66 (13.6%) were with individuals in a different school or school district; 2/66 (3%) were matched with someone of a different ethnicity/race (Hispanic with Other); 2/66 (3%) were matched with an individual with a different dominant language (Chaldean with Russian); and 1/66 (1.5%), was matched with an individual of the opposite gender. Due to missing data, a sample of 43 students with DLD, and 47 typically developing kindergarten students were selected from the larger sample ultimately included in the study. To help describe the 90 participants included in the study, available demographic information on the participants was obtained from the school districts. Child characteristics including ethnicity, dominant language, and socioeconomic status (SES) are displayed in Table 3.

Table 3*Descriptive Information for Developmental Language Disorder and Typically Developing Group**Participants*

	DLD Group	TD Group
Gender		
Female	16 (37%)	17 (36%)
Male	27 (63%)	30 (64%)
Ethnicity		
White	33 (77%)	36 (77%)
Hispanic	4 (9%)	5 (11%)
African American	3 (7%)	2 (4%)
Asian	0 (0%)	1 (2%)
Other	3 (7%)	3 (6%)
SES (Free/Reduced Lunch)	21 (49%)	24 (51%)

Note. DLD classification was determined based on an active Individualized Education Program for language impairment.

Measures

All students participating in the study produced an expository writing sample. These samples were collected in January of the kindergarten school year. Speech-language pathologists were assigned to each elementary school. They and selected paraprofessionals administered all assessments. Teachers' notes on the students' writing samples were used to help with interpretation of the writing.

Students were asked to produce one expository writing sample. The expository writing prompt asked students to describe their mom. A space was provided at the top of the page for students to illustrate their text. A newly developed language sample scoring rubric, the *Expository Language Measures (ELM) Flow Chart*, was used to score the expository writing samples. The *ELM* is an experimental, criterion-referenced assessment of informational text comprehension and production. It is divided into three subsections: Writing Conventions, Language Complexity, and Passage Structure. The Writing Conventions subsection evaluates punctuation, capitalization, and spelling. Punctuation and capitalization are calculated by subtracting the number of errors by the total number of written words. A guide of five to six items is provided to instruct on specific errors to look for. The spelling subsection provides a 0-4 rating scale to apply to each written word to determine spelling accuracy. The average word rating is calculated by dividing the sum of word ratings by the total number of words written. The Language Complexity subsection evaluates the use of relative pronouns, verb/noun modifiers, vocabulary, temporal ties, casual ties, and transitions. Scores are determined using a flow chart style decision tree and individual item scores range from 0-3. The last subsection, Passage Structure, assesses the presence and completeness of a main idea, information units, definitions and examples, passage cohesion, and a concluding statement through an evaluation of the written words and pictures produced by the child. Like the Language Complexity subsection, scores are determined using a flow chart style decision tree and individual item scores range from 0-3. Additional language complexity and productivity features were examined using the Systematic Analysis of Language Transcripts (SALT) language sample analysis software. The SALT measures calculated were total T-units, mean length of T-unit (MLTU), total number of

words (TNW), number of different words (NDW), subordination index (SI), and grammatical accuracy (total number of errors/T-unit).

Procedures

Prior to the study, the participating teachers in the school districts were trained in the administration of the expository writing samples. Research assistants received two one-hour trainings on how to use the *ELM Flow Chart* to score writing samples. Before qualifying to work on the study, the research assistants demonstrated accurate scoring of all the tests and 90% or higher scoring agreement with an independent rater. This same research team was trained to transcribe and score the writing samples in SALT.

Results

To answer research question one for the subgroup of children with typical language and for the children with DLD, we examined the inclusion of language complexity features and organizational structure in the writing samples. These results are displayed in Table 4.

Additionally, we examined the following: (a) the means and standard deviations for the total text structure score from the *ELM*; (b) the means and standard deviations for each item of the *ELM* text structure subsection (e.g., main idea, information units, etc.); (c) the means and standard deviations for the total language complexity score from the *ELM*; (d) the means and standard deviations for each item of the language complexity subsection; (e) the means and standard deviations of each item of the spelling conventions; (f) the means and standard deviations from each item from the SALT data. Results for question one are displayed in Tables 5, 6, and 7.

Table 4*Prevalence of Expository Language Features in the Current Study's Sample*

Prevalence	Criteria	Measure
Present	Mean > 0.5	Greater overall text structure than language ability Main idea (pictures and/or words) MLU 5 TNW 6-8 TNDW 5-7 Subordination index
Minimal	Mean < 0.5	Information units Passage Cohesion Concluding Statement Verb/Noun Modifiers Vocabulary Temporal Ties Causal Ties Grammatical Accuracy
Absent	Mean = 0	Definitions and examples Relative Pronouns Transitions

Note. MLU = mean length of utterance. TNW = total number of words. TNDW = total number of different words.

In order to answer research question number two, a multivariate analysis of variance (MANOVA) was conducted to examine whether there were significant differences across these measures between the students with typical language and the students with language disorder. Effect sizes and *p* values for these measures were calculated. It was hypothesized that the

measures outlined in Table 2 would be significantly different between TD children and children with DLD. Results for question two are also displayed in Tables 5, 6, and 7.

Text Structure Variables

A MANOVA was conducted to examine whether the text structure variables were significantly different between children with and without language disorder. No significant differences were found among any of the dependent variables, Wilks' lambda = 0.97, $F(4, 85) = 0.77$, $p = .55$. Table 5 displays the means and standard deviations of the text structure variables.

Table 5

Expository Language Measures Text Structure Analysis

	TD		DLD			
<u>Measure</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>p value</u>	<u>Effect Size</u>
ELM Total Text Structure	1.76	2.04	1.21	1.62	.17	.02
Main Idea	0.72	.77	0.98	1.01	.18	.02
Information Units	0.14	.50	.22	.57	.46	.01
Definitions And Examples	0	--	0	--	--	--
Passage Cohesion	0.35	.65	0.51	.83	.31	.01
Concluding Statement	0	0	0.04	.20	.18	.02

Note. N = sample size. SD = standard deviation.

Language Complexity Variables

A MANOVA was conducted to examine whether the language complexity variables were significantly different between children with and without language disorder. No significant differences were found among any of the dependent variables, Wilks' lambda = 0.87, $F(5, 34) =$

1.01, $p = .43$. Table 6 displays the means and standard deviations of the language complexity variables.

Table 6

Expository Language Measures Language Complexity and Grammatical Accuracy Analysis

TD				DLD				
<u>Measure</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>p value</u>	<u>Effect Size</u>
ELM Total Lang Complexity		.13	.34		.16	.65	.38	.02
Verb/Noun Modifiers		0.07	.46		0.04	.20	.65	.01
Vocabulary		0.07	.26		.02	.15	.11	.06
Temporal Ties		0.02	.15		0	0	.27	.03
Causal Ties		0	0		0.06	.25	.37	.02
Transitions		0	--		0	--	--	--
Grammatical Accuracy	22	1.05	1.21	22	1.33	1.46	.50	.01

Note. N = sample size. SD = standard deviation.

Systematic Analysis of Language Transcripts Variables

A one-way multi-variate analysis of variance (MANOVA) was conducted to examine whether the SALT variables (without analyzing grammatical accuracy) were significantly different between children with and without language disorder. No significant differences were found among any of the dependent variables, Wilks' lambda = 0.91, $F(5, 69) = 1.38$, $p = .25$.

Table 7 displays the means and standard deviations of the SALT variables.

Table 7*Systematic Analysis of Language Transcripts Data Analysis*

<u>Measure</u>	TD				DLD			<u>p value</u>	<u>Effect Size</u>
	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>			
Total C-Units	31	1.58	1.03	30	1.87	1.7	.82		< .01
MLU	29	5.06	2.90	28	4.73	2.30	.42		.01
TNW	32	6.41	5.25	30	8.93	7.11	.48		.01
TNDW	30	5.20	3.39	30	6.53	4.90	.56		.01
Subordination Index	22	.76	.44	25	.78	.60	.90		.00

Note. *N* = sample size. *SD* = standard deviation. MLU = mean length of utterance. TNW = total number of words. TNDW = total number of different words.

Discussion

The purpose of this study was to describe the written expository text structure, language complexity, and grammatical errors of kindergarten students with and without a language disorder and to determine whether there was a statistically significant difference across those measures between those groups of students. This study revealed that while kindergarteners have some abilities to write expository discourse, many features that are commonly found in older ages (Donovan & Smolkin, 2002; Gatlin et al., 2015; Hall-Mills & Apel, 2015; Westerveld & Moran, 2011) were not present.

For the purposes of this study, the term ‘present’ will refer to averaged scores of more than half a point. The term ‘minimally present’ will refer to the ELM measures in which children averaged less than half a point. ‘Absent’ language features are those that were not produced by any of the children in this study.

Prevalence of Language Features and Text Structures

Present and Minimally Present/Absent Language Features

The majority of language features evaluated (i.e., information units, passage cohesion, concluding statement, verb/noun modifiers, vocabulary, temporal ties, causal ties, and grammatical accuracy) were minimally present and scattered throughout the sample. No patterns or trends between TD and DLD children were identified among these minimally present measures. Definitions and examples, relative pronouns, and transitions were not found in any of the samples evaluated during this study. Without evaluating an expository oral language sample of these children, it cannot be concluded that kindergarten children are not capable of producing these language forms in oral expository discourse. It could be that the inability to produce these forms is a writing barrier, not a language barrier. This shows the importance of evaluating the whole picture of young children's expository language abilities through oral, written, and pictorial means to get a clear understanding of their abilities (Watanabe & Hall-Kenyon, 2011).

Research has identified some language complexity features that are frequently present in young children's oral language. It is known that typically developing English speaking children begin to produce simple clausal structures in their oral language between the ages of 2 and 3 (Diessel, 2004). Some of the first skills to develop include the use of infinitives and noun phrase complements (Bloom & Capatides, 1993). Progressively more complex clausal structures are acquired during the school years (Bloom & Capatides, 1993; Diessel, 2004). While there is a large body of research detailing the development of simple clausal structures and grammatical morpheme acquisition in young children's speech, relatively little is known regarding the development of complex syntax (Arndt & Schuele, 2013). Research shows that complex syntax begins to emerge in children's oral language shortly after the production of two-word utterances

and continues to develop from there (Arndt & Schuele, 2013; Arndt & Schuele, 2012). While it appears that young children are able to produce language complexity features in spontaneous oral language (conversation), the children in the current study were unable to consistently produce the following language complexity and text structure features as scored in the *ELM* in their expository writing samples: information units, passage cohesion, concluding statement, verb/noun modifiers, vocabulary, temporal ties, causal ties, grammatical accuracy, definitions and examples, relative pronouns, and transitions. See *Appendix B* for *ELM* scoring information.

Woods (2022) saw similar results when she examined 279 (200 TD, 79 DLD) kindergarten students' oral expository language. In this study, Woods found transitions and relative pronouns to be completely absent from their expository oral language samples. Minimally present features included vocabulary, concluding statement, definitions and examples, causal ties, temporal ties, and verb-noun modifiers. In the children's expository oral language samples, passage cohesion and information units were present, unlike the current study's expository written language samples. The absence or minimal appearance of many language complexity features in both oral (Woods, 2022) and written expository language samples indicate that a child's orthographic writing ability is not what is preventing the presence of greater language complexity appearing in the writing sample. Rather, young children have not yet developed the capability to consistently produce such advanced language complexity features.

The similarities between this study and Woods (2022) findings could illustrate the extent to which written language is reflective of oral language (Berninger & Abbott, 2010; Kim et al., 2014; Shanahan, 2006; Spencer & Petersen, 2018; Watanabe & Hall-Kenyon, 2011). For example, Shanahan (2006) documented that both forms of language (oral and written) draw upon similar cognitive abilities, such as working memory, linguistic cohesion, and morphological

knowledge and acknowledged that early oral language deficiencies lead to later difficulties with writing. Similarly, Kim et al. (2015a) found that oral language at kindergarten predicted third-grade narrative writing quality. Furthermore, Berninger and Swanson, 1994) found that higher oral language performance was associated with higher quality writing samples. This study when compared to Woods' (2022) study adds to the literature confirming the relationship between written and oral language.

Prevalence of Text Structure

The overall text structure (which includes main idea, information units, definitions and examples, passage cohesion, and concluding statement) of the expository writing sample was typically more prevalent in the kindergarteners' writing samples than language complexity features (relative pronouns, noun/verb modifiers, vocabulary, temporal ties, causal ties, and transitions) as evaluated by the *ELM*. To our knowledge, this is the first study to examine the presence of expository text structure and language complexity features in kindergarteners' expository writing. However, the overall greater presence of text structure over language complexity features reflects Woods' (2022) findings when examining kindergarten students' oral expository language. For both TD and DLD children, the text structure features were on average more present in the expository oral language samples than language complexity features. Therefore, more targeted instruction on language complexity features could be beneficial to increase young children's ability to produce expository discourse.

A fairly consistent text structure component across the samples was the presence of a main idea, through written text and picture depiction. Children appear to identify the main idea first, with supporting details being provided later (if at all). This provides evidence that using the main idea as an anchor in sentences and stories is a typical developmental milestone in language

acquisition and production. This information provides support for tenets advocating that the main idea should be emphasized and explicitly taught to children. Previous research has indicated that such explicit instruction on the main idea improves reading comprehension (Stevens et al., 2019).

Comparison of Typically Developing and Developmental Language Disorder Children's Writing Samples

When comparing the expository writing of typically developing and language disordered students, this study found there was no significant difference in performance between these two groups. Previous research has shown that kindergarten children with language disorders already show signs of falling behind their peers (Arndt & Schuele, 2013; Boudreau & Hedberg, 1999; Tomblin et al., 1997; Woods, 2022). For example, for typically developing children, omission of obligatory grammatical elements in oral language typically disappears by kindergarten. For DLD children, these errors tend to persist through the age of 8. Additionally, it is known that children with DLD produce less complex syntax and omit more grammatical elements when matched to their peers for age or mean length of utterance (MLU; Arndt & Schuele, 2013). Furthermore, TD and DLD children's spoken language performance is separated by the number and variety of verb types they produce (Arndt & Schuele, 2013). All these findings show that differences in the ability to produce complex syntax in oral language are clearly present when comparing TD and DLD children. The writing deficits of young children therefore act as a barrier to highlighting the significant differences that exist between DLD and TD peers. Therefore, it can be concluded that the language complexity, SALT, and text structure features used to evaluate written expository language in this study are an ineffective screening measure for young kindergartener children. However, many of the language and text structure features used in this study to assess expository

written language were found to be markers for DLD in older children's written expository language samples ages 8;11-11;6 and those in 4th and 5th grade (Koutsoftas & Gray, 2012; Scott & Windsor, 2000). Therefore, the measures evaluating written expository language used in this study have been shown to be effective screening tools for older children by at least age 8;11.

A surprising result in this study was that children with DLD scored higher on average on the measures total number of words (TNW) and number of different words (NDW). It is difficult to identify the exact cause of this, perhaps it was simply due to the small sample size of the study. This could also be because the children with DLD would have begun to receive intervention services for their language and therefore received a larger dose of direct instruction. Finally, it is possible that the measures of TNW and NDW are not reflective of DLD. There are mixed results in the current literature of the sensitivity of TNW and NDW in identifying DLD children from TD children in written expository language samples. Out of two studies, TNW was found to be sensitive in only one study, and NDW was found to be sensitive in the other study (Koutsoftas & Gray, 2012; Scott & Windsor, 2000).

Clinical Implications

Accumulating developmental information on young children's expository writing can provide insight into which areas children are competent and which areas they tend to struggle. Identifying these difficulty areas can create more focused and efficacious teaching methods and thus encourage greater progress for children. This in turn would promote a higher percentage of children who would achieve the common core standards which requires them to produce expository written discourse, thereby preparing them for future academic requirements and high stakes testing.

In addition, acquiring developmental information about young children's expository writing abilities could promote and inform early identification of future writing/reading difficulties (Kim et al., 2014). As deficits in morphology and syntax are hallmarks of language disorders, accumulating this information is essential to understanding the characteristics of language disorders in young children. By doing so, earlier intervention would then be possible, thereby decreasing the number of students who do not receive treatment until later grades when they are likely far behind their peers. While this study did not find written expository samples to be a valid way to differentiate TD and DLD children at this young age, it highlighted areas of language complexity and text structure that they could and could not produce in their expository writing at the start of kindergarten. Additionally, this study showed that young children's transcription deficits hide the differences that are present in TD and DLD children's expository language ability, as evidenced by past research highlighting the differences that are present between TD and DLD children's oral language ability (Arndt & Schuele, 2013; Boudreau & Hedberg, 1999; Tomblin et al., 1997; Woods, 2022). While there was no significant difference found between the writing samples of TD and DLD children, a comparison between Woods' (2022) oral expository samples of kindergarteners and this study's participant's written expository samples showed similarities on language features included and omitted. There is a clear association between spoken language, reading, and writing; they contribute to a general language and literacy competence. An improvement in one would likely improve performance in the other (ASHA, 2001; Catts et al., 2001). When aiding children with DLD, it is valuable to have a paired focus of targeting both the children's weakness in expressing language orally, as well as their ability to write. This dual focus on oral language outcomes and written language

measures would be beneficial to simultaneously improve all parts of language to enhance expository writing ability and literacy (Catts et. al, 2001).

SLPs play a vital role in addressing both written and spoken language needs in children with DLD (ASHA, 2001; ASHA, 2016; Catts et. al, 2001). However, many SLPs report a feeling of inadequacy on their capability to provide these services, specifically for expository written language (Fallon & Katz, 2011). It is important that SLPs invest time developing their level of competency and comfort in treating written language deficits for children on their caseload. Providing these services is within the SLP scope of practice and should be offered to children struggling with DLD.

Limitations and Future Research

There were several limitations to this study. This study involved a small sample size and would benefit from the increased accuracy that comes from a large sample size. Furthermore, all participants resided in the same geographic area (Michigan), which contributed to a lack of diversity in the sample. By increasing the sample size and by sampling across the nation, more accurate and applicable data could be acquired regarding young children's expository writing abilities. Missing data caused additional limitations to the study by impacting the sample size and the accuracy of matched sampling. While the majority of the matched pairs remained intact, the affected pairs could leave room for confounding variables such as income level or gender.

This study did not record reliability measures on scoring the *ELM*. This is a major limitation. Reliability measures should be present in future research to ensure consistency and accuracy in the scored data.

Another limitation in this study was the omission of scoring pictures if they were not accompanied by words. As pictures are an important part of gaining understanding of the sum of

a young child's language ability, scoring all pictures would have collected valuable information that would have contributed to a better understanding of young children's expository language abilities. Future research should continue to explore the information that young children's pictures add about their ability to understand and produce language.

Additionally, although the language complexity, SALT, and text structure features used to evaluate written expository language in this study were not present or were minimally present in the written samples evaluated, this does not mean that valuable information cannot be gathered from kindergartener's expository written language samples. It is possible that this study was measuring the wrong things. Perhaps there are precursors to the more complex language forms evaluated in this study that would provide a clearer picture of kindergartener's expository writing abilities. By measuring different things, kindergarten expository writing samples may be an effective screening measure to differentiate between TD and DLD children. Further research should be done to identify earlier developing language features and evaluate their effectiveness in demonstrating kindergarteners' expository writing abilities.

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APPENDIX A

Annotated Bibliography

Berman, R. A., & Nir-Sagiv, B. (2007). Comparing narrative and expository text construction across adolescence: A developmental paradox. *Discourse Processes*, 43(2), 79-120.

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Objective: This study researched how expository and narrative texts differ in linguistic expression and organization. It investigated early speaker-writer's abilities to understand the differences between narrative and expository texts. The developmental timetables of each genre is also explored.

Method: Writing samples were taken from a large database of English speaking participants from seven different countries. This study examined 80 narratives and 80 expository texts written by schoolchildren, adolescents, and adults. After watching a short film, each writing task was elicited from each participants following a series of prompts. Lexical, linguistic, and syntactical features, content, and macrostructure elements were measured and examined.

Results: Even the youngest children can differentiate between the two types of discourse. The principles of narrative composition are established by mid-childhood, but expository text composition does not reach competence until adolescence. Despite that, more complex vocabulary and grammar are used in expository texts than narratives.

Relevance to current work: This study concluded that expository discourse requires increased lexical, syntactical, and macrostructural abilities. Additionally, it was found that expository discourse often requires a higher cognitive demand to comprehend and produce than narratives.

Donovan, C. A., & Smolkin, L. B. (2002). Children's genre knowledge: An examination of K-5 students' performance on multiple tasks providing differing levels of scaffolding. *Reading Research Quarterly*, 37(4), 428-465. <https://doi.org/10.1598/RRQ.37.4.5>

Objective: This study examined children's developing genre knowledge through evaluating a range of responses and tasks with varying levels of support. They sought to determine if there were patterns in children's demonstration of knowledge about narrative and expository genres across grades K-5.

Method: Teachers selected 24 children in grades K-5 (4 children per grade) to participate in an interview with researchers. These children were described as above average writers. Children were asked about their reading and writing experiences at home. All children wrote a narrative story, an expository text, and an explanation about the difference between the two genres. All compositions were analyzed for micro and macrostructure elements.

Results: Findings suggest that scaffolding can both assist and hinder children in demonstrating their full range of genre knowledge, depending on the circumstance. They also suggest the existence of cognitive shifts between implicit and explicit writing forms.

Relevance to current work: This work documented kindergarteners' ability to not only create simple oral and written expository passages, but also express understanding that there are differences between narrative and expository writing.

Fallon, K. A., & Katz, L. A. (2011). Providing written language services in the schools: The time is now. *Language, Speech, and Hearing Services in Schools*, 42(1), 3-17.

[https://doi.org/10.1044/0161-1461\(2010/09-0068\)](https://doi.org/10.1044/0161-1461(2010/09-0068))

Objective: This article evaluated the proportion of school based SLPs actively providing written language intervention to children on their caseload and the variables that correlated with the likelihood of those services being provided. Furthermore, it explored SLP's knowledge, attitudes, and collaborative practices in the domain of written language.

Method: A web-based survey was sent to public school based SLPs from all 50 states. The responses received included 645 full time school based SLPs from 49 states. Questions in the survey were closed response and included rating, pull-down menus, multiple choice, and check all that apply. Questions sought information about the background of the SLP; attitudes, knowledge, and preparedness about providing written language services; collaboration with teachers; and materials available.

Results: More than one-third of SLPs are not providing any written language services to their students with language impairments. Only 20% of SLPs reported that they provided written language services for 100% of the children on their caseloads that had written language needs. About 50% of school based SLPs reported providing some written language services. *Relevance to current work:* A small percentage of school based SLPs are providing written language services to students who have deficits in that area. This is a cause for concern due to ASHA's statement on the important role SLPs should play in providing written language services.

Hall-Mills, S., & Apel, K. (2015). Linguistic feature development across grades and genre in elementary writing. *Language, Speech, and Hearing Services in Schools*, 46(3), 242-255.
https://doi.org/10.1044/2015_LSHSS-14-0043

Objective: This study examined the timeline of development of linguistic elements in 2-4 grade children's narrative and expository writing. Specifically, this study strove to identify if there was a difference between grade levels and genres in microstructure and macrostructure elements, and the degree to which the microstructure and macrostructure elements were related.

Method: Microstructure and macrostructure levels in narrative and expository writing samples of 89 children in grades 2-4 (aged 7;0 to 10;11) were analyzed. Measures of receptive vocabulary (PPVT-4), word-level reading, and reading comprehension (The Group Reading Assessment and Diagnostic Evaluation [GRADE] subtests of word reading, sentence comprehension, and passage comprehension were obtained). The researchers used a scripted, generated elicitation method to obtain 15-minute writing samples to examine through the SALT software.

Results: Differences were found between grade levels in terms of microstructure and macrostructure. Measures of productivity are sensitive to grade and age changes in both narrative and expository writing. No grade level differences were found for grammatical accuracy or lexical diversity. Productivity and macrostructure were sensitive to grade-level and genre differences. Significant changes were seen between 2 and 3 grades in grammatical complexity in expository writing, but not between 3 and 4 grades. *Relevance to current work:* This study provides an image of what typically developing expository language skills look like in children in grades 2-4. Similar language measures can be used to evaluate the linguistic elements in kindergarten student's writing.

Koutsoftas, A. D., & Gray, S. (2012). Comparison of narrative and expository writing in students with and without language-learning disabilities. *Language, Speech, and Hearing Services in Schools*, 43(4), 395-409. [https://doi.org/10.1044/0161-1461\(2012/11-0018\)](https://doi.org/10.1044/0161-1461(2012/11-0018))

Objective: The purpose of this study was to investigate how 4th and 5th grade students with language learning difficulties (DLD) written language difficulties (i.e., productivity, complexity, and grammar) affect their performance on high-stakes standardized tests (e.g., such as tests required by the No Child Left Behind Act, 2002) compared to typically developing peers. Writing samples of TD and DLD children were scored with analytic writing measures typically used in research (i.e., TNW productivity, NDW semantic use, EPT [errors per T-unit] grammaticality, CPT sentence complexity, PDSE [proportion of total spelling errors] measure of spelling accuracy, and story grammar analysis measure of content for narrative samples only.) as well as with the six traits writing rubric (STWR) that is often used in high-stakes assessments. These subtests include ideas and content, organization, voice, word choice, sentence fluency and conventions. Additionally, the relationships between scores from analytic language measures and the STWR were analyzed.

Method: 30 typically developing children and 26 children with DLDs in the 4th and 5th grades with similar levels of maternal education participated in this study. The DLD group had more 5th graders than the TD group. These children participated in the CELF-4, handwriting accuracy--speed (writing time in minutes) measures, narrative writing samples, and expository writing samples.

Results: Students with DLD performed significantly lower than TD peers in areas of productivity, lexical diversity, grammatical and spelling accuracy, and sentence

complexity, depending on the genre. On narratives, the TD groups scored higher on 5 analytic measures and all 6 STWR traits when compared to the DLD group. For expository writing, the TD group outperformed the DLD group on 3 analytic measures and all 6 STWR traits. Furthermore, only narrative writing samples showed a significant correlation with an overall higher score on the STWR for the analytic scores of productivity, sentence complexity, and lexical diversity.

Relevance to current work: Children with DLDs score significantly lower on expository writing tasks than TD children. Therefore, it is important to have separate normative data for this population. Additionally, as these language measures have been evaluated in expository writing before, they may be explored in my analysis of kindergartener's expository writing samples. I can be aware of areas where children with LD may differ from TD.

Lundine, J. P., Harnish, S. M., McCauley, R. J., Blackett, D. S., Zezinka, A., Chen, W., & Fox, R. A. (2018). Adolescent summaries of narrative and expository discourse: Differences and predictors. *Language, Speech, and Hearing Services in Schools*, 49(3), 551-568.
https://doi.org/10.1044/2018_LSHSS-17-0105

Objective: This study aimed to determine whether children and adolescent's summaries of texts differed between narratives and two expository subtypes (compare-contrast and cause-effect). A composite cognitive score or an expressive syntax score were evaluated to determine if they were predictive of summary quality across the three types of discourse.

Method: Fifty typically developing participants ages 13-18 were recruited to participate in this study. Students were instructed on how to efficiently summarize a

passage and read an example with the facilitator. Students were then asked to summarize a recently seen movie and feedback was given to establish competency of the task. Students then watched three 5-minute films (2 expository, 1 narrative) that all contained details about a fictitious place (to control for prior knowledge) in a randomized order. After each film they gave their best summary of the lecture. The summaries were transcribed into SALT and scored for quality.

Results: Results indicated a significant difference in performance between the three summaries. Cause-effect had a significantly higher score than the compare-contrast summaries. The narrative summary mean score fell between the two expository tasks. Additionally, composite cognitive measures only contributed significantly to the prediction of the quality of the expository summaries. Whereas the expressive syntax score only contributed significantly to the prediction of the quality of the narrative summaries. *Relevance to current work:* Cognition was found to be a significant predictor of the ability to summarize expository texts. In contrast, cognition was not a predictor for narrative summarization. This finding suggests that expository discourse is correlated to cognitive ability.

Lundine, J. P., & McCauley, R. J. (2016). A tutorial on expository discourse: Structure, development, and disorders in children and adolescents. *American Journal of Speech-Language Pathology*, 25(3), 306-320. https://doi.org/10.1044/2016_AJSLP-14-0130

Objective: This paper is a tutorial that provides information on the structure, development, and specific difficulties related to expository discourse. It provides a background information to aid clinicians in their treatment of school-aged children with language difficulties.

Method: A systematic search process was conducted, and a comprehensive qualitative review of the research is provided. The internal and external validity of the research design of the reviewed articles are also evaluated.

Results: An extensive narrative review of the articles was discussed. It was concluded that researchers and clinicians should promote the need for research surround expository language and its application to development and learning. *Relevance to current work:* This work explains that expository discourse in particular has increased in prominence across the grade levels. Additionally, it describes the most significant micro and macrolevel features present in expository writing. Furthermore, the cognitive complexity of expository discourse is reviewed.

Scott, C. M., & Windsor, J. (2000). General language performance measures in spoken and written narrative and expository discourse of school-age children with language learning disabilities. *Journal of Speech, Language, and Hearing Research*, 43(2), 324-339.
<https://doi.org/10.1044/jslhr.4302.324>

Objective: This study evaluated the effectiveness of 10 general language performance measures in identifying children with language learning disabilities from chronological-age and language-age peers. Both an oral and a writing sample was elicited and evaluated using these measures.

Method: Sixty students ages 8:11-11:6 were categorized in three groups. The first group contained 20 students with DLD. The next 20 students were matched to the DLD children for chronological age, and 20 were matched to their language age. Each child summarized two educational videotapes (1 expository, 1 narrative) verbally and through writing. Samples were transcribed and coded using SALT. They were then analyzed with

the 10 general language performance measures (i.e., total T-units, total words, total time at task, T-units per minute, words per minute, percent T-units with mazes, number of different words, words per T-unit, clauses per T-unit, and errors per T-unit).

Results: Results of the study found that total T-units, total words, and words per minute were significantly lower for children with DLDs than for CA peers. Additionally, children with DLD had significantly lower grammatical complexity than both CA and LA peers as measured by words per T-unit. Percent T-units with mazes and number of different words were not distinguishable across the groups. *Relevance to current work:* Children with DLDs score significantly lower on expository writing tasks than TD children. Therefore, it is important to have separate normative data for this population. Additionally, as these language measures have been evaluated in expository writing before, they may be explored in my analysis of kindergartener's expository writing samples. I can be aware of areas where children with LD may differ from TD.

Watanabe, L. M., & Hall-Kenyon, K. M. (2011) Improving Young children's writing: The influence of story structure on kindergartners' writing complexity. *Literacy Research and Instruction*, 50(4), 272-293, <https://doi.org/10.1080/19388071.2010.514035>

Objective: This study evaluated the change in kindergartener's writing complexity as a result of guided writing instruction and assessment to teach story elements. It also explored the importance of including oral, written, and pictorial elements in representing the complexity of the children's thinking.

Method: This study included writing, oral language, and pictorial samples taken from six children of differing abilities (two beginner, two intermediate, two advanced) across the course of a 6-week period. These samples were evaluated using two scoring

rubrics (i.e., one evaluating writing development and one evaluating the inclusion of story elements) created for this study.

Results: Guided writing instruction and assessment was found to improve the writing and inclusion of story elements of all six children. All children conveyed additional information, complexity, and story elements in their oral language samples than in their writing alone due to lack of ability and/or time constraints. Additionally, the use of pictures to evaluate the complexity of a child's thinking was very important for beginning writers. Pictures faded in importance to the intermediate writers as they focused their efforts on improving their writing. Pictures made a reappearance with the advanced writers and improved the communication of their story. This study concludes that writing is the process of conveying ideas, and that oral language, written text, and pictorial representations are all important to convey an accurate picture of a child's ability to write.

Westerveld, M. F., & Moran, C. A. (2011). Expository language skills of young school-age children. *Language, Speech, and Hearing Services in Schools*, 42(2), 182-193.

[https://doi.org/10.1044/0161-1461\(2010/10-0044\)](https://doi.org/10.1044/0161-1461(2010/10-0044))

Objective: This study is replicating and extending Nippold, Hesketh, et al. (2005) study. The expository oral language capabilities of 6- and 7-year-old children from New Zealand were examined to establish norms of typical development. Additionally, it compares how expository language abilities change with age (specifically 6-7 vs 11).

Method: Sixty-two New Zealand children ages 61 6-7:11 (36 girls and 26 boys) were included in this study. Twenty 11-year-olds from NZ were also sampled. They used the FGS (favorite game or sport) elicitation task as a prompt for an expository oral

discourse sample. Verbal productivity (Total T-units, WPM), syntactic ability (MLY, clausal density i.e., subordination index [clauses/T-units]), grammatical accuracy, and verbal fluency (% of mazed words) were measured.

Results: Discourse produced from the FGS task resulted in fairly normal distribution across some language production measures. Verbal productivity, grammatical accuracy, and verbal fluency had age-related differences, but syntactic complexity did not. *Relevance to current work:* This study looks at the expository oral language of young, school age children. They were able to obtain information on verbal productivity, syntactic ability, grammatical accuracy, and verbal fluency from oral samples. These specific measures have been identified in their oral language and will thus be looked for in their written language. Additionally, this shows that young school age children are capable of producing expository language.

Wolfe, M. B., & Woodwyk, J. M. (2010). Processing and memory of information presented in narrative or expository texts. *British Journal of Educational Psychology*, 80(3), 341-362.
<https://doi.org/10.1348/000709910X485700>

Objective: This study had three primary questions. First, the researchers sought to find if expository texts trigger different processing of content than narratives. Also, they collected data on the influence prior knowledge of the reader has on processing activities between the two genres. Lastly, the researchers examined if the genre influenced different memory and learning outcomes. Two related questions related to the confound between text content and genre created by embedding common sentences in texts of different genres was also addressed.

Method: A total of 61 university undergraduates participated in experiment 1. In this study, participants completed a free-response 17 question circulatory system knowledge assessment. Then, subjects were given either a narrative or an expository text about the circulatory system. They were given the text one sentence at a time, and then prompted to state everything the sentence made them think about before moving on to read the next sentence. Once completed, students were given a 3-5 minute math test. This was followed by writing down anything they recalled of text content. A total of 160 undergraduate students participated in experiment 2. In this experiment, subjects read the same narrative or expository text silently then completed a sentence recognition task to assess memory.

Results: When reading the expository text, participants made more associations to prior knowledge and recalled more content than when reading the narrative text. Additionally, the amount of prior knowledge correlated with the amount of recall only for participants who read the expository text. Furthermore, those reading the expository text has a weaker text base representation but a slightly stronger situation model than those who read the narrative text. The results suggest that for new/unknown content, expository texts trigger students to access prior knowledge more than narrative texts. *Relevance to current work:* Expository text requires greater processing and memory of unfamiliar content than when reading the same content in narrative. This means that expository texts require a greater cognitive load than narrative texts with the same subject content.

APPENDIX B

Expository Language Measures Flow Chart

ELM Flow Chart

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Child Name/ID#: _____
 Grade: _____ Teacher: _____
 School: _____
 Examiner/Transcriber/Scorer: _____

	YEAR	MO	DAY
Date Tested			
Date of Birth			
Child's Age			

Sampling Context:
Check all that apply

- ☐ Oral
☐ Written
☐ Generation
☐ Retell
☐ With pictures
☐ Without pictures
☐ Other: _____

Language Complexity Score: _____

Passage Structure Score: _____

Punctuation Score: _____

Capitalization Score: _____

Average Word Rating: _____

TOTAL SCORE:
(LC + PS)

WRITING CONVENTIONS (OPTIONAL)

PUNCTUATION	CAPITALIZATION	SPELLING
Number of words written _____	Number of words written _____	Sum of word ratings _____
Number of errors _____	Number of errors _____	Number of words written _____
PUNCTUATION SCORE Subtract number of errors from total number of words written.	CAPITALIZATION SCORE Subtract number of errors from total number of words written.	AVERAGE WORD RATING Divide the sum of word ratings by the total number of words written.
Calculate Errors Add up capitalization errors (up to 3 for each type) for when punctuation was needed and was used incorrectly (0 = not needed)	Calculate Errors Add up capitalization errors (up to 3 for each type)	Rating Scale Rate each word in the written sample using the rubric below
Period at end of sentence 0 1 2 3	Lowercase for regular word 1 2 3	① Unconventional symbol. Contains vertical line, dot, circle instead of letter or number.
Question mark 0 1 2 3	Uppercase I 1 2 3	② Conventional symbol. Contains at least one real letter or number, but is unrecognizable as a word. Examples: "4", "J", "15", "63n"
Apostrophe 0 1 2 3	Uppercase for first word of sentence 1 2 3	③ Phonetic representation. Contains one or more letters that are phonetically related to a recognizable word. Examples: "b" or "bd" for bird, "r" for one
Quotation mark 0 1 2 3	Uppercase for proper names 1 2 3	④ Invented spelling. Contains two or more letters that represent most of the phonemes of a recognizable word. "Must" have a vowel and be easy to figure out. Examples: "bir" for bird, "gol" for girl
Comma in a list 0 1 2 3	Uppercase for holidays, days, and months 1 2 3	⑤ Conventional spelling. Spelled correctly.
	Uppercase for acronyms 1 2 3	

LANGUAGE COMPLEXITY

RELATIVE PRONOUNS	VERB/NOUN MODIFIERS	VOCABULARY	TEMPORAL TIES	CAUSAL TIES	TRANSITIONS
3 + instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., Monkeys, who, are agile creatures, swing in the trees.)	1 + instances of 2 consecutive descriptive modifiers (e.g., a large, dirty monkey) OR 2+ instances of single descriptive modifiers before a verb or a noun (e.g., Monkeys are found in the tall trees. We usually swing from limb to limb.)	3 + less-common domain-specific words related to the topic (e.g., their natural habitat; they change their form during metamorphosis.)	3 + instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	3 + instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	2 + instances of transition words/phrases (e.g., therefore, similarly, as a result, however, for example, likewise, in contrast)
YES 3	YES 3	YES 3	YES 3	YES 3	YES 4
NO	NO	NO	NO	NO	NO
2 instances of relative pronouns immediately after nouns (that, who, which, who's) (e.g., Many snakes live in trees that have enough leaves to disguise them.)	1 instance of single descriptive modifier before a verb or a noun (e.g., The large monkeys) OR 2+ instances of single descriptive modifiers after a verb (e.g., Monkeys can climb quickly.)	2 less-common domain-specific words related to the topic (e.g., high body temperatures; they grow crops)	2 instances of temporal words (that are often used in complex sentences) (when, after, before, while, as, until)	2 instances of causal words (that are often used in complex sentences) (because, so (that), since, unless, although, even though)	1 instance of a transition word/phrase (e.g., therefore, similarly, as a result, however, for example, likewise, in contrast)
YES 2	YES 2	YES 2	YES 2	YES 2	YES 2
NO	NO	NO	NO	NO	NO
1 instance of relative pronoun immediately after a noun (that, who, which, who's) (e.g., Early humans began building cities, which allowed them to stay in one place.)	1 instance of single descriptive modifier after a verb (e.g., Monkeys swing easily in the trees.)	1 less-common domain-specific word related to the topic (e.g., trash goes to landfills)	1 instance of a temporal word (that is often used in complex sentences) (when, after, before, while, as, until)	1 instance of a causal word (that is often used in complex sentences) (because, so (that), since, unless, although, even though)	
YES 1	YES 1	YES 1	YES 1	YES 1	
NO	NO	NO	NO	NO	
0	0	0	0	0	
LANGUAGE COMPLEXITY SCORE:					

PASSAGE STRUCTURE

MAIN IDEA	INFORMATION UNITS	DEFINITIONS & EXAMPLES	PASSAGE COHESION	CONCLUDING STATEMENT
<p>2 + complete and clear main ideas directly related to the pictures/topic or from model passage</p> <p>(e.g., Caterpillars turn into butterflies during metamorphosis.)</p> <p>YES 3</p> <p>NO</p> <p>1 complete and clear main idea directly related to the pictures/topic or from model passage</p> <p>(e.g., Humans have five senses to help them learn about the world.)</p> <p>YES 2</p> <p>NO</p> <p>1 + incomplete or unclear main idea</p> <p>(e.g., Tigers live in the jungle.)</p> <p>YES 1</p> <p>NO</p> <p>0</p>	<p>Refer to the Scoring Manual for detailed instructions for scoring information units.</p> <p>Factual Unit = a clause, containing a subject and a verb, that conveys one piece of factual information or is presented like it is factual, whether or not it is accurate.</p> <p>e.g., Tigers are carnivores (1). You want to stay away from them (2). When tigers stroll through the jungle (3), they carefully search for their next meal (4).</p> <p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p> <p>Picture Description Unit = a clause, containing a subject and a verb, that explicitly describes what is shown in the picture(s) or directly references the picture.</p> <p>e.g., In this picture, it looks like they dug the ground (1). Here the mushroom grows (2). This one is healthy (3).</p> <p>1 2 3 4 5 6 7 8 9 10</p> <p>Narrative Unit = a clause, containing a subject and a verb, that tells about a specific real or imaginary event in past tense; the subject is often a character.</p> <p>e.g., My grandpa and I went camping (1). There was a lake by our campsite (2). They decided to go get help (3).</p> <p>1 2 3 4 5 6 7 8 9 10</p> <p>Number of Information Units $\div 2 =$ </p>	<p>Use of at least 1 definition AND Use of at least 1 example</p> <p>(e.g., Flora refers to the plants that live in an area. In desert climates, the flora includes a variety of cacti.)</p> <p>YES 3</p> <p>NO</p> <p>Use of a definition OR Use of an example</p> <p>(e.g., Flora refers to the plants that live in an area.) OR (e.g., Monkeys and gorillas are some of the fauna living in jungles.)</p> <p>YES 2</p> <p>NO</p> <p>Use of an incomplete or unclear definition or example</p> <p>(e.g., It means the animals.)</p> <p>YES 1</p> <p>NO</p> <p>0</p>	<p>A main idea is stated and all information units support the main idea</p> <p>YES 3</p> <p>NO</p> <p>There is no main idea but most or all of the information units are about the same topic OR A main idea is stated and some of the information supports it</p> <p>YES 2</p> <p>NO</p> <p>There is no main idea and only some of the information units are about the same topic</p> <p>YES 1</p> <p>NO</p> <p>0</p>	<p>Does the passage have a concluding statement?</p> <p>YES 1</p> <p>NO 0</p> <p>EXPOSITION TYPE</p> <p>What type of exposition best fits this sample?</p> <p><input type="radio"/> How To <input type="radio"/> Description <input type="radio"/> Sequence <input type="radio"/> Comparison <input type="radio"/> Cause/Effect <input type="radio"/> Problem/Solution</p> <p>Does not count toward Passage Structure Score</p>

PASSAGE STRUCTURE SCORE: