ORAL LINGUISTIC SKILL AND READING LITERACY IN EMERGENT BILINGUAL ENGLISH-SPANISH SPEAKING CHILDREN

By

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A THESIS

Presented to the Department of Education
and the Robert D. Clark Honors College
in partial fulfillment of the requirements for the degree of
Bachelors of Science

May 2019

An Abstract of the Thesis of

Maia Emily Kailani Wilson for the degree of Bachelor of Science
in the Department of Education to be taken May 2019

Title: Oral Linguistic Skill and Reading Literacy in Emergent Bilingual English-Spanish Speaking Children

Approved: _____

Dr. Audrey Lucero

This thesis examines the correlations between oral linguistic skills and reading literacy skills in emergent bilingual children who speak both English and Spanish and discusses the significance of these correlations. Specifically, this investigation explores the correlations between emergent bilingual students' oral language skills – measured by the Narrative Scoring Scheme in both English and Spanish – and their English reading fluency scores – measured by word reading fluency and passage reading fluency. Correlations were calculated for the entire data set, then as separated by instructional program type (dual-language immersion or English only) and finally by grade level (first or second grade). The information presented is significant to help support emergent bilingual English-Spanish speaking students in the United States public education system.

Acknowledgements

This thesis has truly been an incredible journey of both personal and intellectual growth. Although there is not nearly enough space for me to thank all who have supported me, I would like to thank my Thesis Committee members Dr. Audrey Lucero, for her expert guidance, continuous support as Primary Thesis Advisor, and incredible patience throughout the entirety of this process. Thank you to Dr. Tim Williams, who served as my CHC Representative and played such an essential role in making me push myself in my academic career and reminding me of my capabilities. Thank you to Graduate Teaching Fellow Kevin Donley for being willing and eager to step up and support me as my Second Reader.

Thank you to my three parents and each of my siblings. You keep me grounded, and bring out the very best in me. To the resilient and fiercely strong women in my life- my sister, mother, and grandmother- you are the reason that I push myself every day. Thank you for supporting me in every aspect of life. Thank you, Barbara, for being there every step of the way and always picking me up when I fall. To my other friends, family, and mentors, thank you for shaping me into the person that I am today. Each of you has left an incredible and lasting impression on me.

Table of Contents

List of Tables & Graphs

Introduction & Background

In the early elementary education system in the United States, reading fluency and oral language skill are two critical components that teachers are told to focus on. The ideology behind this is that these two particular skills lay the foundation for language learning and help to scaffold future complex learning. Some of these more complex skills include reading comprehension and oral language ability. Throughout this investigation, children who are on track to be fluent in two languages, specifically, Spanish speaking students who learn English formally in school in the United States, will be referred to as emergent bilinguals. Although emergent bilingual students have an advantage in potentially attaining the skills to be formally proficient and fluent in two languages, children who speak English as a second language enter elementary school are often slightly behind their English-only speaking peers when it comes to foundational English language skills (Rich, 2014). It is therefore crucial for them to grasp the foundations of the English language once they begin formal schooling. This thesis will investigate the relationship between the scores of emergent bilingual students in English reading fluency as measured by correct words read per minute using the EasyCBM assessment and oral language skills as measured by the Narrative Scoring Scheme in both English and Spanish.

Spanish is spoken by over 41 million households in the United States (Ziegler & Camarota, 2018). The increasing presence of Spanish language and Latino culture in the United States has led to gaps in the public education system. Students in early elementary school who speak Spanish at home often attend English-only schools that isolate and label them as being academically “not proficient” in their grade level. Native

Spanish-speaking students get caught in a cycle of never catching up to their English-only speaking peers, or if they are able to catch up, they often lose some of their Spanish-speaking reading and writing proficiency. The importance of students continuing to learn in both their native language and their second-learned language will be discussed throughout this paper.

Students in the United States should not have to abandon learning their native language in a formal setting simply because English is the language predominantly used in the United States. Dual-language immersion programs offer a "best of both worlds" approach where a child can advance their learning in both English and their native language. Most dual-language immersion programs offer core classes like math, writing, science, etc., in both languages, with instruction in one language in the morning and then switching to the other language halfway throughout the school day. This allows the students to get equal instruction in each language and promote both linguistic skills and skills in the subject being taught at the time. There are currently over 1,000 dual-language immersion programs throughout the United States ranging from kindergarten all the way to twelfth grade and representing over twenty unique languages (NBC, 2014). Opposition to dual-language immersion programs has been strong among some communities, arguing that having elementary-age students attend classes in both English and another language will cause a lack of proficiency in their spoken and written English language skills (Valdés, 1997). In contrast, many people have denied that this is an outcome of dual-language immersion schools and argue that there are actually significant benefits to having elementary and beyond-age students attend dual-language immersion programs (Collier & Thomas, 2004).

People in the U.S. who do not speak English proficiently are ostracized and often labelled as unintelligent. The United States school system has emphasized English learning in a way that oftentimes suppresses a student's native language. There has been common opinion that in order to support a child's journey of learning the English language, the school system must stunt the linguistic growth of a child's native language if it is anything other than English. Although some teachers and administrators hold this belief personally, there has been no proof to show that this is truly the case for students learning English as a second language.

Research on the benefits of dual-language immersion programs for students who are emergent bilinguals has been conducted. The conclusion of this research has shown when such programs are implemented correctly and students receive quality instruction in both languages, this route of schooling has shown to be more beneficial to emergent bilingual students than traditional English-only instruction (Collins, 2014). Dual-language programs have also been shown to be beneficial for native English-speaking students, allowing them to learn another language starting from the fundamental learning years. Some of the benefits of dual language immersion programs include: better ability to learn other languages in the future, higher achievement in other areas such as science and math, and the ability to have a multidimensional approach to problem-solving (Collier & Thomas, 2004).

Personally, I was a dual language learner in Japanese and English starting in first grade. Although I spoke English at home, learning a second language at such a young age was incredibly influential to the way that I learned to view my own education as well as the world around me. There were many students at my school who spoke

Japanese at home and as their first language, which prompted me to question the different ways that dual language immersion schools have an effect on the academic success of a non-Native English-speaking student.

The two criteria that are to be measured and compared in this study are oral language proficiency scores using the Narrative Scoring Scheme (NSS), and reading fluency in the form of words read correctly per minute aloud (WRF and PRF). NSS is a standard used across the nation to help measure a person's proficiency in oral language. As described by the American Speech-Language-Hearing Association (ASHA), the NSS scoring guide is "an assessment tool that provides an index of the student's ability to produce a coherent narrative" (Malone, 2010). For reading fluency, the measures are word reading fluency (WRF) which is the number of words read correctly in list form in English in one minute, obtained through the EasyCBM standardized test, and passage reading fluency (PRF), which is the number of words read correctly in paragraph form in English in one minute, also collected through the EasyCBM test.

This thesis will attempt to address the relationship between oral linguistic skill (NSS) and reading fluency (WRF & PRF) in emergent bilingual students and support the claims that emergent bilingual students have better success and achievement in both their native and second language when they participate in dual-language immersion programs (Collier & Thomas, 2004). This thesis will investigate and compare the possibility that as children are enrolled in a dual-language immersion school for longer, there is a higher correlation between the cross-language transfer of literacy skills and the within-language skills from oral language to fluency, which will include the relationship between oral literacy skills and academic reading skills.

Research Questions

In this study, I will have access to extant data from Dr. Audrey Lucero, specialist in language and literacy education, and Associate Professor at the University of Oregon. This data has been previously collected by conducting in-person assessments in various elementary schools in the Eugene/Springfield area with bilingual children in first and second grade enrolled in either English-only, or English-Spanish dual-language immersion programs and in two areas: oral language proficiency scores using the NSS, and reading fluency skill in the form of EasyCBM (See Appendix D) WRF and PRF. The questions guiding this thesis are the following:

Key Question: (1) To what extent is the English oral linguistic skill score (ENGNSS) and Spanish oral linguistic skill score (SPNSS) correlated to the English reading fluency score (WRF and PRF) in emergent bilingual students in first and second grade?

(2) Is the correlation stronger for emergent bilingual students enrolled in dual-language immersion programs than emergent bilingual students enrolled in English-only programs?

(3) How does the child's grade level change these correlation?

To answer these questions, I will run different analyses to find correlations which will potentially reveal relationships that (1) both English and Spanish oral linguistic skills are significantly correlated to English reading skills, (2) these correlations are stronger for children enrolled in dual-language immersion programs, and (3) these correlations are stronger as students grade level increases.

Literature Review

Over time there has been significant research done on the role that language plays in the classroom and how bilingual learners might differ from learners whose first language is also the predominant language spoken in the classroom (Collins, 2014). Data on the development of emergent bilingual learners in early childhood education has been collected showing,"children's microstructure and macrostructure retelling abilities to be specifically predictive of decoding and reading comprehension both within and across languages" (Lucero, 2018, pg. 249-250), as a composite measure of oral language proficiency. What has not been investigated is the link between the oral linguistic skills and reading fluency skills in children who are learning in dual-language immersion programs. This thesis will address an investigation on the possible links between oral language skills and reading skills in both Spanish and English for first and second grade elementary school students who are bilingual learners, in both English-only and dual language immersion programs. It has been argued that ESL (English Second Language) learners should be assessed in both their native language and the dominant language, and the results compared side by side because the lack of analysis in this area could allow emergent bilingual students to be incorrectly assessed in their academic learning levels (Valdés, 1997).

The cross-language transfer of emergent literacy skills, especially in terms of oral language, has been investigated and discussed at length for preschool-age children in Spanish (Goodrich et al., 2013), but not for students in early elementary school, or an investigation that focuses on both English and Spanish. It has been found that not all literacy skills are transferred across languages in preschool-age children, which

Goodrich et al. (2013) examines, but there is still little known about this subject, especially as emergent bilingual children get older.

Some of the more recent investigation done about the subject of the effectiveness of dual-language immersion education has focused not on if dual-language immersion education is more beneficial as compared to standard monolingual education, but more of how to make sure that students in dual-language immersion education programs are receiving their education in the most effective and beneficial way possible (Baker, 2010). This study also outlines the way that the effectiveness of these different forms of educational systems should be measured by students' overall progress instead of general markers because of the different ways that schools are structured and what they choose to emphasize.

There has been significant study of the correlation and relationship between oral linguistic skill in native language and second-learned language (Castilla et al, 2009). The relationship between this ability across multiple languages has been investigated in kindergarten students attending an English-only school after they received a formal English education for nine months of the academic year. Research done thus far with children beyond kindergarten-age children and children who attend dual-language immersion schools has been focused on English development but not focused on both English and Spanish language development. My research will look to fill the gap in this research by assessing the possible relationship between the transfer of skills from first-learned language, to second-learned language, i.e. in this case, emergent bilingual students in English and Spanish.

Research focused on the relationship between the role of home and school linguistic environments in the first few years of formal schooling and language proficiency has been conducted (Collins, 2014). A study was conducted comparing Spanish and English proficiency scores using the Woodcock Language Proficiency Batteries-Revised (WLPB-R), which focuses on the level of specific linguistic domains of both Spanish and English. The conclusions of a study conducted by Collins et al. (2014) support prior findings that bilingual children reach higher levels of proficiency in both English and their native language when they receive formal instruction in both despite the public support there has been for English-only programs (Garcia, Kleifgen, & Falchi, 2008). While there have been many studies to support the idea that bilingual students reach higher achievement in school when they have the opportunity to work in both English and their native language, such as the study previously mentioned done by Collins et al. (2014), my thesis will work to support this claim with the correlation of concrete scores between oral language proficiency and reading fluency skill.

Much of the previous research that has been conducted regarding the correlation between reading fluency and oral story retelling abilities has been only done in English (Miller, Heilmann, Nockerts, Iglesias, Fabiano, & Francis, 2006). It is only in the last fifteen years that this research has begun to be done in Spanish as well. It is important to note that having scores in both English and Spanish helps to show a child's abilities in the subject being assessed and not just their proficiency in that specific language. Assessing students in both languages allows the assessor to see what foundational skills they have and be able to notice any discrepancies between their assessment in English and their assessment in Spanish.

Methods

To answer the research questions, data previously collected by Dr. Audrey Lucero was used to investigate correlations between oral language data scores and reading fluency scores. This approach used Statistical Package for the Social Sciences or SPSS software to help calculate and effectively present the statistical calculations from the data. SPSS is a software system package that organizes and analyzes batched data. This software system was used to run correlations using the extant data collected in two areas: oral linguistic proficiency and reading fluency scores. First, I ran correlations between English NSS scores and Spanish NSS scores with both PRF and WRF scores. I then divided up the data first by educational program the students were enrolled in (English-only, LOI=0 or dual-immersion, LOI=1), and ran the same correlation analyses as above, and then divided up the data by grade level (first grade, GRADE=0 or second grade, GRADE=1) and ran the same correlations. The following tables, table #1 and #2, show the quantitative data regarding the number of students that were assessed in each category when the data was originally collected.

Table #1 Total Number of Data Scores Divided by Program Type

	Number of Students
English Only	54
Dual-Language Immersion (Spanish/ English)	73
TOTAL	**127**

Table #2 Total Number of Data Scores Divided by Grade

	Number of Students
First Grade	55
Second Grade	72
TOTAL	**127**

In some cases, there is a total sample of 127 students that data was collected from. For some sets of data, there are fewer than 127 total scores (N) due to various reasons. See tables #1 and #2 for breakdown of total data sets and N values in each table for the number of scores used in each calculation.

This data has been previously collected by conducting in-person assessments in various elementary schools in the Eugene/Springfield area with bilingual children in first and second grade. The oral linguistic proficiency scores were collected in both Spanish and English using the Narrative Scoring Scheme (NSS), which includes three levels of scoring (i.e. one point, three points, five points) for seven different characteristics of storytelling (introduction, character development, mental states, referencing, conflict resolution, cohesion, conclusion) (See Appendix A). In conducting the assessment, each child was given a picture-only story book (See Appendix C) and then played a recording of a person reading the story in Spanish (See Appendix B for audio transcript). The children were then asked to retell the story in Spanish in their own words, and their responses were recorded. Each response was granted points and scores using NSS at a later time by an assessor who listened to the recording of the retelling of the story. Around a week later, this method was repeated using a recording

of a person telling the story in English with the student retelling the story in English. The reading fluency scores were assessed by providing each student with a reading excerpt and recording their correct words per minute (See Appendix D). This research was conducted with Institutional Research Board approval, protocol #09082014.006.

Typical research methods in this subfield often include isolating oral language skill, such as one-word picture vocabulary tests, where a proctor has a page with pictures of three items such as a key, a door, and a mailbox. The proctor prompts the child with, “point to the picture that shows a door,” and then measures the child on their ability to identify the vocabulary words that are given by the proctor. These tests are referred to as isolated oral language skills and give a yes-or-no means of quantitative scoring students on their ability to know and recognize vocabulary words.

Storytelling, as described in detail above, provides robust information about each child's understanding of the pictures and stories that are given. Although this information can produce a “score” for each child after being analyzed on a sliding scale, this data is considered to be qualitative and can be analyzed as such. Storytelling allows for the assessor to gain more information than isolated skill measurement on its own because there are so many aspects to storytelling. Students all come from incredibly different backgrounds, and they will have different words that they are used to and comfortable answering in this type of setting.

Early childhood education is a difficult area of research because of the many barriers that exist for working with such a vulnerable group as children. Based on United States federal research guidelines, children are federally protected (Office for Human Research Protections, 2016). There are many obstacles when using children as

research subjects. The first obstacle is getting into schools, which can include approval from the district, principal, teachers, and parents. All of these people must give approval to the access of the children, which often requires a thorough explanation of why the work that is attempting to be collected will contribute to the broader community. It also usually requires building relationships with the principals, teachers, and students to gain their trust and confidence in requiring children to be accessed outside of their typical school assessments. This research is even more difficult than some standard educational research because it involves bilingual students who are native Spanish speakers. In a monolingual community such as Eugene, Oregon, using only one or two schools for data will not have enough students that can be used for research. To find enough native-Spanish speakers in the correct age-range, the investigation had to be conducted at several different elementary schools in the Eugene and Springfield areas. This adds significant time and energy to the research being conducted because maintaining relationships and asking for approval has to be done on a much wider scale if more schools are involved. Approval for conducting research using elementary-aged students includes many layers of approval including the initial IRB approval, approval from the principal, teacher, parents or guardian of the child, and the child themselves. Another challenging part of collecting this data is recognizing that students could be affected in ways such as bullying, missing class time, and not understanding why they are having additional testing. If only students who are native-Spanish speakers are being pulled out of class, they are subject to taunting and other negative energy by their classmates who are not part of the study being conducted.

Data that is collected in elementary educational research must be secure at all times. It must be anonymized, never allowing anyone but the proctor to identify the students who have had data collected about them. All data collected is kept on a secure hard drive, in a secure place, and is never shared with anyone other than the head researcher. After the data is anonymized, some of the data can be coded by a professional resource, and other analyses are done by graduate students. The analysis portion of research is time-consuming. It requires hour after hour of work to make sure that all are accurately predicting what data was collected in the first place. Difficulties in this area being an early researcher include not being experienced enough to know if certain data looks completely wrong and also knowing how to be organized and keep all of the data together so that it can be readily accessed and distributed when needed.

There tends to be both quantitative and qualitative research done in the elementary educational research world. The picture vocabulary tests are a common form of quantitative research because there are right and wrong answers that can be recorded as getting points for a question or no points. Qualitative data is often acquired in the form of the narrative task, where there can be more than one right answer, and the level of sophistication of answers is more what is being assessed. Common software that is used includes SALT (Systematic Analysis of Language Transcripts) and SPSS (Statistical Package for the Social Sciences)for statistical analysis. There are various stages when analyzing this data, and most often new research questions are being formulated at all times in order to maximize what can be answered with the data that is difficult to acquire.

When analyzing the data used in this study, correlations were found using the SPSS software, and the $R^2$was found for each set of data correlations. SPSS supplied two sets of numbers for each correlation, the R^2number, which means how correlated the two sets of data are to each other. If the number was 1, it would mean that it was perfectly correlated, and if the correlation was 0, it means that the two sets of data have no correlation to each other. If the correlation was -1, it means that the two sets of data are perfectly negatively correlated. The software also supplies a number that shows how significant the correlation is to each other. The statistical significance used in this data analysis was set at $p < 0.05$, a commonly used benchmark.

Findings

Research Question 1: (1) To what extent is the English oral linguistic skill score (ENGNSS) and Spanish oral linguistic skill score (SPNSS) correlated to the English reading fluency score (WRF and PRF) in emergent bilingual students in first and second grade?

PRF = Passage Reading Fluency

WRF = Word Reading Fluency

ENGNSS = English Narrative Scoring Scheme

SPNSS = Spanish Narrative Scoring Scheme

Table #3 Descriptive Statistics For Entire Data Set

	Mean	**Median**	**Min - Max**
ENGNSS	17.73	18	8 - 27
SPNSS	18.66	20	7 - 27
PRF	62.22	54	5 - 172
WRF	38.06	33	6 - 92

Table #4 English NSS Correlations with PRF and WRF

	Correlation (R^2)	**Significance**	**Number Value (N)**
PRF/ENGNSS	0.408	$p < 0.001$***	114
WRF/ENGNSS	0.416	$p < 0.001$***	77

* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #4 shows the findings of the correlations calculated between the students PRF score and NSS score in English, and WRF score and NSS score in English. Table #4 shows that there was significant correlation found between the PRF score and the English NSS score, with a correlation of $R^2 = 0.408$, significant at the $p = 0.00$ level. Table #4 also shows that there was significant correlation found between the WRF and English NSS score of $R^2 = 0.416$, significant at the $p = 0.00$ level.

Table #5 Spanish NSS Correlations with PRF and WRF

	Correlation (R^2)	**Significance**	**Number Value (N)**
PRF/SPNSS	0.229	$p < 0.05$*	107
WRF/SPNSS	0.348	$p < 0.01$**	72

* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #5 shows the findings of the correlations calculated between the students PRF score and NSS score in Spanish, and WRF score and NSS score in Spanish. Table #5 shows that there was significant correlation between the PRF score and the Spanish NSS score, with a correlation of $R^2 = 0.229$, significant at the $p = 0.018$ level. Table #5 also shows that there was significant correlation found between the WRF and Spanish NSS score of $R^2 = 0.348$, significant at the $p = 0.003$ level.

These findings show that there were significant correlations between PRF and English NSS scores and PRF and Spanish NSS scores, as well as WRF and English NSS scores and WRF and Spanish NSS scores. This suggests that a students oral

language skills in both English and Spanish are significantly correlated to their English reading fluency level.

Research Question 2: Is the correlation stronger for emergent bilingual students enrolled in dual-language immersion programs than emergent bilingual students enrolled in English-only programs?

Table #6 Descriptive Statistics Divided by LOI for English-Only Students

English-Only Scores (LOI= 0)	**Mean**	**Median**	**Min - Max**
ENGNSS	16.88	17	8 - 26
SPNSS	17.76	20	7 - 26
PRF	55.29	38	5 - 172
WRF	38.71	30	9 - 92

Table #7 Descriptive Statistics Divided by LOI for Dual-Language Immersion Students

Dual-Language Immersion Scores (LOI= 1)	**Mean**	**Median**	**Min - Max**
ENGNSS	18.38	19	9 - 27
SPNSS	19.24	20	7 - 27
PRF	67.68	65	5 - 155
WRF	37.40	33	6 - 84

Table #8 Correlations for English-Only (LOI = 0)

English- Only Scores (LOI = 0)	Correlation (R^2)	Significance	Number Value (N)
PRF/ ENGNSS	0.371	$p < 0.01$**	51
WRF/ ENGNSS	0.405	$p < 0.01$**	40
PRF/ SPNSS	0.373	$p < 0.01$**	43
WRF/SPNSS	0.454	$p < 0.01$**	34

* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #8 shows the findings of the correlations calculated between the students PRF score and NSS score in Spanish, and WRF score and NSS score in Spanish for emergent bilingual students enrolled in English-only programs. Table #8 shows that there was significant correlation found between PRF and WRF scores for both Spanish and English NSS. PRF and English NSS had a correlation of $R^2 = 0.371$, significant at the $p = 0.007$ level. WRF and English NSS had a correlation of $R^2 = 0.405$, significant at the $p = 0.01$ level. PRF and Spanish NSS had a correlation of $R^2 = 0.373$, significant at the $p = 0.014$ level. WRF and Spanish NSS had a correlation of $R^2 = 0.454$, significant at the $p = 0.007$ level.

Table #9 Correlations for Dual-Language Immersion (LOI = 1)

	Correlation (R^2)	**Significance**	**Number Value (N)**
PRF/ ENGNSS	0.412	$p < 0.001$***	63
WRF/ ENGNSS	0.448	$p < 0.01$**	37
PRF/ SPNSS	0.113	*ns* $p = 0.376$	64
WRF/SPNSS	0.283	*ns* $p = 0.085$	38

* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #9 shows the findings of the correlations calculated between the students PRF score and NSS score in Spanish, and WRF score and NSS score in Spanish for emergent bilingual students enrolled in dual-immersion programs. Table #8 shows that there was significant correlation found between PRF and WRF scores in English NSS, but a non-significant correlation with Spanish NSS. PRF and English NSS had a correlation of $R^2 = 0.412$, significant at the $p = 0.001$ level. WRF and English NSS had a correlation of $R^2 = 0.448$, significant at the $p = 0.005$ level. PRF and WRF were not significantly correlated with Spanish NSS.

For students attending English only schools, the correlations with PRF and WRF with English and Spanish NSS scores were all significantly correlated. For students enrolled in dual immersion programs, the PRF and WRF scores were significantly correlated for NSS scores in English, but were not significantly correlated with their scores in Spanish.

Research Question 3: How does the child's grade level change these correlation?

Table #10 Descriptive Statistics Divided by GRADE

Second Grade Scores (GRADE=0)	Mean	Median	Min - Max
ENGNSS	18.70	19	9 - 26
SPNSS	19.01	20	7 - 27
PRF	81.45	84	5 - 172
WRF	50.66	55	9 - 92

Table #11 Descriptive Statistics Divided by GRADE

First Grade Scores (GRADE=1)	Mean	Median	Min - Max
ENGNSS	16.33	15	8 - 27
SPNSS	18.26	18	7 - 27
PRF	35.14	26	5 - 111
WRF	29.84	24	6 - 84

Table #12 Correlations for Second Grade (GRADE = 0)

	Correlation (R^2)	**Significance**	**Number Value (N)**
PRF/ ENGNSS	0.336	$p < 0.01$**	69
WRF/ ENGNSS	0.409	$p < 0.05$*	32
PRF/ SPNSS	0.177	*ns* $p = 0.156$	66
WRF/SPNSS	0.240	*ns* $p = 0.193$	31

* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #12 shows the findings of the correlations calculated between the students PRF score and NSS score in Spanish, and WRF score and NSS score in Spanish for emergent bilingual students in Second grade. Table #12 shows that there was significant correlation found between PRF and WRF scores in English NSS, but not significant correlation with Spanish NSS. PRF and English NSS had a correlation of $R^2 = 0.336$, significant at the $p < 0.005$* level. WRF and English NSS had a correlation of $R^2 = 0.409$, significant at the $p < 0.020$* level. PRF and WRF was not significantly correlated with Spanish NSS.

Table #13 Correlations for First Grade (GRADE = 1)

	Correlation (R^2)	**Significance**	**Number Value (N)**
PRF/ ENGNSS	0.370	$p < 0.01$**	45
WRF/ ENGNSS	0.349	$p < 0.05$*	45
PRF/ SPNSS	0.323	$p < 0.05$*	41
WRF/SPNSS	0.338	$p < 0.05$*	41

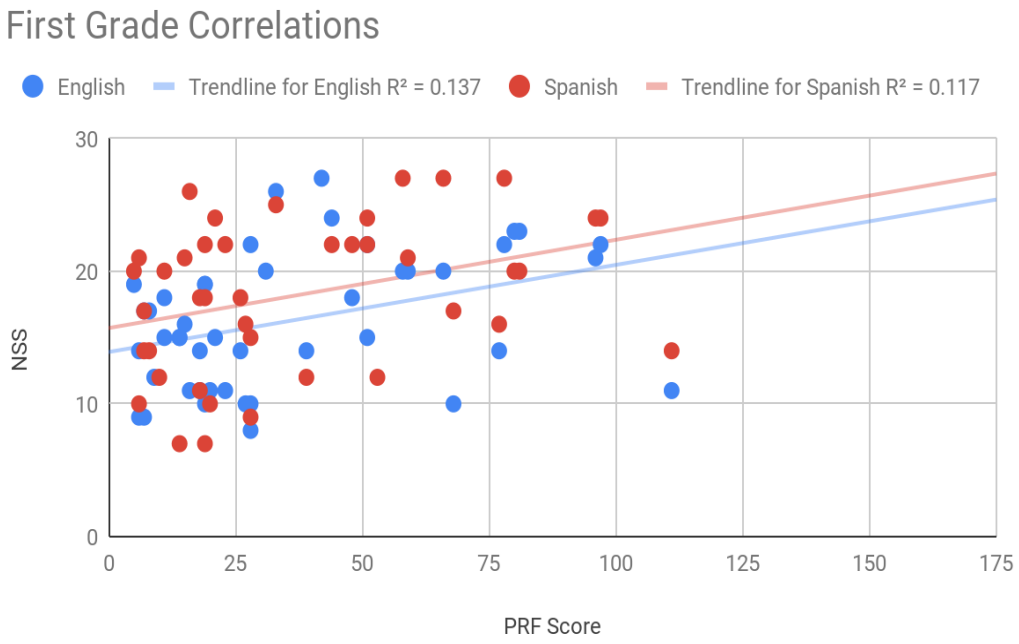
* = values with significance $p < 0.05$ meaning a significant correlation
** = values with significance $p < 0.01$
*** = values with significance $p < 0.001$

Table #13 shows the findings of the correlations calculated between the students PRF score and NSS score in Spanish, and WRF score and NSS score in Spanish for emergent bilingual students in first grade. Table #13 shows that there was significant correlation found between PRF and WRF scores for both Spanish and English NSS. PRF and English NSS had a correlation of $R^2 = 0.370$, significant at the $p = 0.012$ level. WRF and English NSS had a correlation of $R^2 = 0.349$, significant at the $p = 0.019$ level. PRF and Spanish NSS had a correlation of $R^2 = 0.323$, significant at the $p = 0.028$ level. WRF and Spanish NSS had a correlation of $R^2 = 0.338$, significant at the $p = 0.031$ level.

Scatter plots allow a visual representation of the data sets shown in the table above. Strengths of a scatter plot include the ability to see each set of data that was originally assessed, as well as see the representation of the tables above on the same scale so a more visual representation can be expressed. For each subset of data, the grade level of the participants has been acknowledged and the two grade levels are

distinguished from one another as represented in each graph. Both English NSS and Spanish NSS scores are used in the following graphs, with English represented with the color blue, and Spanish represented with the color red. With the NSS scores in each language on the Y-axis, the PRF scores are represented on the X-axis. PRF scores were chosen over WRF scores because PRF gives a more authentic, comprehensive score to the student's reading fluency abilities. The following scatter plots are presented due to these reasons:

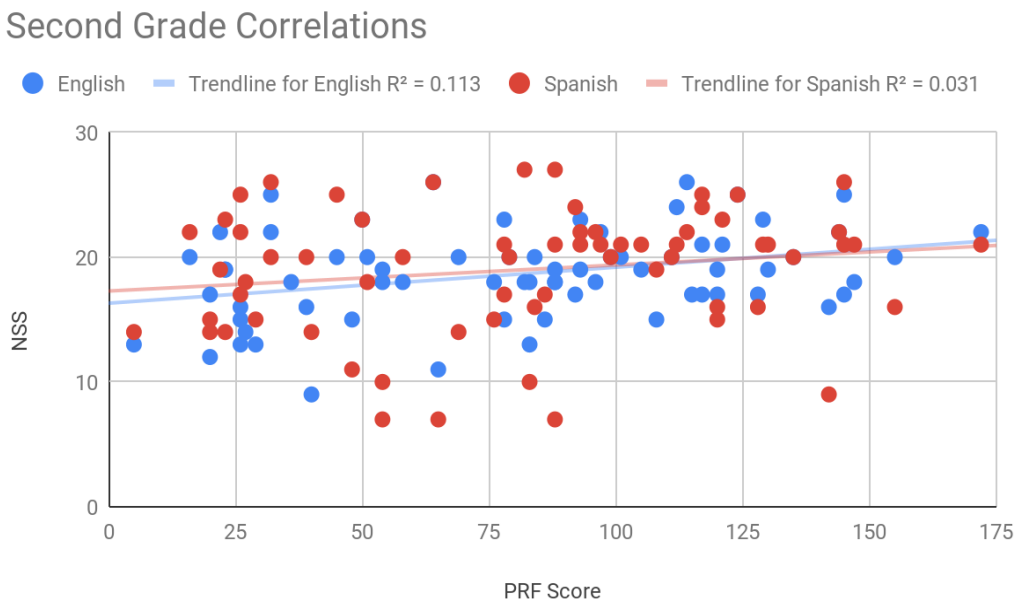
Graph #1: First Grade Scatter Plot



Graph #1 shows the relationship between the First grade participants' scores in PRF and NSS in both English and Spanish. Each set of data also includes a trend line which emphasizes the difference in the relationship between the PRF score with the English NSS score versus the Spanish NSS score. While relations across languages were all significant, there is a slightly more significant correlation between the PRF and

English NSS score than with the PRF and Spanish NSS score. For data from First grade, English has a trendline slope of $R^2 = 0.137$ and Spanish has a trendline slope of $R^2 = 0.117$.

Graph #2: Second Grade Scatter Plot



Graph #2 shows the relationship between the second grade participants scores in PRF and NSS in both English and Spanish. Each set of data also includes a trend line which emphasizes the difference in the relationship between the PRF score with English NSS versus Spanish NSS. While the two sets of data have a similar minimum and maximum, the slope, and therefore R^2, are quite contrasting. The slope for the trendline for English is $R^2 = 0.113$, while the trendline for Spanish is $R^2 = 0.031$. The line for English and Spanish cross, presumably due to the level of correlation possibly having a limit to which English and Spanish scores are correlated.

Discussion

Emergent bilingual students start school far ahead of their English-only speaking peers in their potential to speak two languages, they also, on average, start seven months behind their English-only speaking peers in oral language and preliteracy skills in English (Rich, 2014). Reading skills are fundamental to many aspects of education, and when students begin school already behind their peers, this gap often continues to increase in the first few years of school. This sets students even further behind in essential reading skills such as fluency. Research on the way that home language skills can help to close this gap has been conducted by Collins (2014), who determined that home language use helped with academic proficiency, essentially working to close this gap. Investigating student's skills in their native language can demonstrate their potential capabilities in a second learned language (Goodrich et. al, 2013).

This thesis has worked to investigate the relationship between English reading fluency scores (WRF and PRF) as measured by the EasyCBM and oral language skills in both English and Spanish as measured by NSS. I found that English oral linguistic score (NSS) and Spanish oral linguistic score (NSS) are both significantly correlated to word reading fluency in English (WRF) and passage reading fluency (PRF). Overall, scores in English NSS were more highly significantly correlated to WRF and PRF than Spanish NSS. When broken down into the subcategories of grade level (GRADE) and educational program (LOI), it was found that overall, the correlations between reading fluency (WRF and PRF)and oral language retelling ability, (ENGNSS and SPNSS) were significantly correlated for students either in first grade or in English-only programs, but Spanish NSS scores are not significantly correlated for students either in

second grade or enrolled in dual-immersion programs. My original hypothesis that each of these correlations would be significant was not completely supported by the data, but rather, certain groups and conditions were proven to be correct. This discussion section will address each of the questions posed in the thesis, and after each question is addressed, discussion of the findings in dialogue with the existing literature will be stated.

The key question posed in this thesis was the investigation of the correlations between English oral linguistic skill score (ENGNSS) and Spanish oral linguistic skill score (SPNSS) compared to English reading fluency score (WRF and PRF) in emergent bilingual students at a first and second grade elementary school level.

English NSS was more highly significantly correlated to both PRF and WRF scores than Spanish NSS scores. This could be due to the Narrative Scoring Scheme and the EasyCBM building off of each other, so that the skills in oral language retell also support the reading skills of the students, since both of the tests were administered in English. Research regarding the relationship between children's early fundamental difficulties in English oral language and difficulties in English reading have been discussed, with evidence found to support the idea that narrative discourse skill is related to reading performance in students in kindergarten through third grade (Roth, Speece, Cooper, & De La Paz., 1996).

Spanish NSS scores were also significantly correlated, just not as correlated as English NSS. Because Spanish NSS scores were proven to be significantly correlated, the idea that supporting native language literary skills to help with foundational English literary skills is supported through this investigation, similar to earlier findings from

Lindsey et al. (2003), that found phonological awareness to be transferred from English to Spanish, and also predict word-identification skills. The study conducted by Goodrich et al. (2013) also demonstrates the evidence in support of the transfer of specific linguistic information across languages.

The second question and sub-question of the key question stated above, addressed throughout this paper is regarding the strength in correlation between students enrolled in either dual-language immersion programs or English-only programs.

It was hypothesized that children enrolled in dual-language immersion schools would have a stronger correlation between English reading fluency scores (WRF and PRF) and oral language skills (ENGNSS and SPNSS), due to findings in previous research that demonstrated positive outcomes for dual-language immersion programs (Collier & Thomas, 2004), but the data proved otherwise. The data showed that English reading fluency scores were significantly correlated to both ENGNSS and SPNSS for students enrolled in English-only programs, but the data showed that for students enrolled in dual-language immersion programs, there was only a significant correlation between English reading fluency scores and ENGNSS, but no correlation with SPNSS. The discrepancy in significant correlation in English-only and dual-language immersion programs could be due to students having more advanced oral retelling abilities in Spanish because they are receiving instruction both in the home and at school. This could lead to lower correlations because their oral Spanish speaking skills (SPNSS) could be improving a rate completely isolated form their English reading skills (WRF and PRF). As earlier research suggests, the different environments in which children

learn and practice their language skills is incredibly influential to their foundation of learning (Collins, B. A., 2014).

The third question, as a sub-question of initial question, discusses the way that the child's grade level could impact the correlation between English reading fluency (WRF and PRF) with oral language retelling abilities (ENGNSS and SPNSS).

When comparing the correlations of WRF and PRF scores with both English and Spanish NSS scores for first versus second graders, the most significant difference was in the scores being compared with Spanish NSS for the second graders. It was found that there is no significant correlation between reading fluency scores (WRF and PRF) and Spanish NSS for second graders only. This correlation was found to be significant when looking at first grade participants and in the larger pool of participants as a whole. This trend could show that the students foundational knowledge at a younger developmental age is more correlational than each year as they progressively receive more advanced formal instruction in the school system. At different times in a child's growth and development, oral linguistic retell abilities and reading comprehension could deviate from one another due to changes in a child's language skills. In a longitudinal study conducted to assess children's language systems, it was found that 25-30% of ipsative scores (amount that the standard score for age on each language measure deviated from individual's mean for all four measures) had strengths or weaknesses in specific language skills depending on the grade level (Berninger & Abbott, 2010).

Implications

As Spanish continues to grow as the second most spoken language in the United States, there is also an increase in emergent bilingual students in the American public school system who are learning many of their foundational language skills in the formal school setting. More research needs to be done in this area due to the pressing issues it surrounds in the U.S. public education system. The two common school structures that emergent bilingual students are attending are English-only programs and dual-language immersion programs. English-only programs feature a traditional setting of school in which every subject is taught in English. Students who speak Spanish at home and do not already have a foundation of English language skills come into this environment behind their English-speaking peers. Dual-language immersion programs offer a non-traditional school setting in which half of the school day is devoted to learning traditional subjects such as math, science, history, etc. in one language, and the other half of the day in the second language. When emergent bilingual students start at dual-language immersion schools, they start with foundational linguistic skills that help set them up to improve reading skills. In language learning, there is a critical period of learning that takes place during childhood that makes learning a language much easier. Once students are bilingual, it is easier for them to become multilingual because they have developed the language learning skills in their brain.

Findings from this study are important because they suggest that responsibility structured dual-language immersion programs can be beneficial to emergent bilingual students, but also that English-only programs can still promote a support of oral linguistic skills in English and Spanish, as well as reading fluency skills in English.

Given these findings, I would recommend that English-Spanish emergent bilingual students could be sucessful in both English-only and dual language immersion programs, but that English-only programs could provide a better foundation for their English and Spanish skills to grow. Other kinds of research should be conducted comparing dual language immersion schools that have different structures, to determine if one structure is more beneficial than another when it comes to supporting emergent bilingual students. It is important to make sure that students are being assessed in both English and Spanish, especially at the beginning of their formal education so that an accurate representation of their skills can be assessed, instead of an assessment more about their language abilities than their literacy skills. Dual-language immersion programs can provide beneficial structure for emergent bilingual students, and at the same time increase the skill sets of students who speak English at home.

Many facets of this research could be expanded upon such as regressions to show the predictability between the different scores and factors that have been discussed. One could test English NSS as a predictor and see what the prediction scores were on its own, and then add Spanish NSS to see how it changed the prediction score. From a future study testing these predictions, evidence could be found to show that, contrary to popular belief in the school system, supporting native language skills predicts how well a student will perform in a second learned language, or show the opposite to be true.

Appendix A: The Narrative Scoring Scheme

The Narrative Scoring Scheme

Characteristic	Proficient (5 pts)	Emerging (3 pts)	Minimal/immature (1 pt)
Introduction	Setting -Child states general place and provides some detail about the setting (e.g., reference to the time of the setting—daytime, bedtime, or season). -Setting elements are stated at appropriate place in story. Characters -Main characters are introduced with some description or detail provided.	Setting -Child states general setting but provides no detail. -Description or elements of story are given intermittently through story. -Child may provide description of specific element of setting (e.g., the frog is in the jar). OR Characters -Characters of story are mentioned with no detail or description.	-Child launches into story with no attempt to provide the setting.
Character development	-Main character(s) and *all* supporting character(s) are mentioned. -Throughout story it is clear that child can discriminate between main and supporting characters (e.g., more description of and emphasis on main character[s]). -Child narrates in first person using character voice (e.g., "You get out of my tree," said the owl).	-Both main and active supporting characters are mentioned. -Main characters are not clearly distinguished from supporting characters.	-Inconsistent mention is made of involved or active characters. -Characters necessary for advancing the plot are not present.
Mental states	-Mental states of main and supporting characters are expressed when necessary for plot development and advancement. -A variety of mental state words are used.	-Some mental state words are used to develop character(s). -A limited number of mental state words are used inconsistently throughout the story.	No use is made of mental state words to develop characters.
Referencing	-Child provides necessary antecedents to pronouns. -References are clear throughout story.	-Referents/antecedents are used inconsistently.	-Pronouns are used excessively. -No verbal clarifiers are used. -Child is unaware listener is confused.
Conflict resolution	-Child clearly states all conflicts and resolutions critical to advancing the plot of the story.	-Description of conflicts and resolutions critical to advancing the plot of the story is underdeveloped. OR -Not all conflicts and resolutions critical to advancing the plot are present.	-Random resolution is stated with no mention of cause or conflict. OR -Conflict is mentioned without resolution. OR -Many conflicts and resolutions critical to advancing the plot are not present.
Cohesion	-Events follow a logical order. -Critical events are included, while less emphasis is placed on minor events. -Smooth transitions are provided between events.	-Events follow a logical order. -Excessive detail or emphasis provided on minor events leads the listener astray. OR -Transitions to next event are unclear. OR -Minimal detail is given for critical events. OR -Equal emphasis is placed on all events.	-No use is made of smooth transitions.

Appendix (p. 2 of 2)

The Narrative Scoring Scheme

Characteristic	Proficient	Emerging	Minimal/immature
Conclusion	-Story is clearly wrapped up using general concluding statements such as "and they were together again happy as could be."	-Specific event is concluded, but no general statement is made as to the conclusion of the whole story.	-Child stops narrating, and listener may need to ask if that is the end.

Scoring: Each characteristic receives a scaled score of 0–5. Proficient characteristics = 5; Emerging = 3; Minimal/immature = 1. Scores between (i.e., 2 and 4) are undefined; use judgment. Scores of zero and NA are defined below. A composite is scored by adding the total of the characteristic scores. Highest score = 35.

A score of zero is given for child errors (such as telling the wrong story, conversing with examiner, not completing/refusing task, using wrong language and creating inability of scorer to comprehend story in target language, abandoned utterances, unintelligibility, poor performance, or components of rubric are in imitation-only).

A score of NA (nonapplicable) is given for mechanical/examiner/operator errors (such as interference from background noise, issues with recording such as cut-offs or interruptions, examiner quitting before child does, examiner not following protocol, or examiner asking overly specific or leading questions rather than open-ended questions or prompts).

Appendix B: Transcripts for Picture Books Used For Data Collection

English Script for *Frog Goes To Dinner* by Mercer Mayer (1974)

A boy was getting dressed in his bedroom. His pet dog, frog and turtle watched as he put on his best clothes.
While the boy was petting the dog, the frog jumped into his coat pocket. The boy didn't know he was there.
As the boy left with his family, he waved and said "Goodbye" to his pets. The frog waved goodbye too.
When the boy and his family arrived at a fancy restaurant, the doorman helped them out of the car. The frog peaked out of the boy's pocket but no one noticed him.
The boy and his family sat down at a table in the restaurant. While they were looking at the menus, the frog jumped out of the boy's pocket towards the band.
The frog landed right in the man's saxophone! "Squeak" went the saxophone.
The man looked inside the saxophone to see why it made that awful noise.
Then the frog fell out of the horn and landed right on the saxophone player's face!
The saxophone player was so surprised that he fell backwards into the drum.
The drummer yelled at the saxophone player, "Look what you did to my drum- it's broken!" While they were arguing, the frog jumped away on a plate of lettuce salad.
The waiter didn't notice the frog. He served the salad to a woman.
Just as she was about to take a bite, the frog popped out of the lettuce. The woman was shocked to see the frog.
She screamed and fell back on her chair. The frog was frightened and he jumped away.
There was a man at the next table who was having a glass of wine with his wife. The frog landed right in his glass.
The woman complained to the waiter about getting a salad with a frog in it. She was very angry!
Meanwhile, when the man went to take a sip of his drink, the frog kissed him right on the nose.
The angry waiter was about to grab the frog who was waving goodbye to the man and his wife.
The waiter, who had caught the frog, was going to throw him out of the restaurant. But the boy saw the waiter carrying his frog and shouted, "Hey, that's my frog!" The boy's mother told him to be quiet.
The boy asked the waiter to give him back his frog.
The angry waiter told the boy and his family, "Take your frog and get out of this restaurant at once. Don't you ever bring that frog in here again!"
On the way home the boy's family was angry with him. The frog had ruined their dinner!
When they got home the boy's father scolded him, "You go to your room and stay there!" The dog and the turtle peaked around the corner to see what was going on.
When they got in his room, the boy and the frog laughed about everything that had happened at the restaurant. The more they thought about it, the more they laughed.

Spanish script for *Frog Goes to Dinner* by Mercer Mayer (1974)

Página	Papel
1	Un niño se estaba preparando para salir a cenar. Sus mascotas el perro, la tortuga, y la rana lo miraban mientras él se ponía sus mejores ropas. Estaban tristes porque sabían que él iba a salir sin ellos.
2	Mientras que el niño acariciaba al perro, la rana brincó dentro del bolsillo del niño. El niño no sabía que la rana estaba en su bolsillo.
3	Cuando la familia se iba, el niño les dijo adiós a sus mascotas. La rana también les dijo adiós.
4–5	Cuando la familia del niño llegó a un restaurante lujoso, el portero les ayudó a bajar del carro. La rana miró con cuidado desde el bolsillo.
6–7	En el restaurante se sentaron en una mesa. Mientras miraban el menú, la rana se escapó del bolsillo del niño y brincó hacia la banda musical.
8	¡La rana terminó dentro del saxofón! Cuando el músico empezó a tocar su instrumento, el sonido fue horrible.
9	Por eso, él miró dentro de su instrumento para ver que pasaba. Los otros músicos estaban muy confundidos como él.
10	¡Luego la rana le cayó y aterrizó en la cara del músico!
11	Y entonces el músico sorprendido, se cayó hacia atrás y cayó dentro del tambor.
12–13	El tocador del tambor gritó al otro músico: "¡Mira lo que pasó – mi tambor está roto! ahora, ¿Con qué voy a tocar?." Mientras ellos discutían, la rana brincó y terminó en la ensalada.
14	El mesero no se dio cuenta que la rana estaba en la ensalada. El mesero le sirvió la ensalada a una señora.
15	Cuando empezaba a comerla, la rana salió por debajo de la lechuga. La señora estaba aterrorizada al ver la rana.
16	Ella gritó y se cayó para atrás. La rana estaba asustada y salió brincando.

Spanish Script for *Frog Goes To Dinner* by Mercer Mayer (1974)

17	En la próxima mesa había un hombre y su esposa tomando una copa de vino. La rana se cayó en el vaso del señor.
18	La mujer se quejó de que había encontrado una rana en su ensalada. ¡Ella estaba muy enojada!
19	Mientras tanto, cuando el señor fue a tomar la copa, la rana salió y le dio un beso en la nariz.
20–21	El mesero enojado estuvo a punto de capturar la rana. El hombre y su esposa se fueron del restaurante porque no se sentían bien para comer con animales en la comida.
22–23	El mesero cuando capturó la rana, la cargó hasta la puerta para botarla. Pero el niño vió al camarero con su rana y le gritó: "¡Esa es mi rana, no la botes!" Su mamá le dijo al niño que se callara.
24	El niño estaba preocupado de que el mesero iba a botar su rana en la calle. Entonces el niño le dijo al mesero que le diera su rana.
25	El camarero les dijo al niño y su familia: "Toma tu rana y salgan de ese restaurante inmediatamente. ¡No permitimos animales ni gente que los traen en este restaurante!"
26–27	Durante el camino de vuelta, la familia del niño estaba enojada. ¡La rana arruinó la cena!
28–29	Cuando llegaron a la casa el padre del niño lo regañó y le dijo: "Vete a tu cuarto y quédate allí". El perro y la tortuga miraron de escondidas desde el rincón para ver que pasó.
30	Cuando llegaron a su cuarto, el niño y su rana se rieron de todo lo que había pasado en el restaurante. Mientras más pensaban en todo lo que había pasado, más reían.

English Script for *Frog, Where Are You?* By Mercer Mayer (1969)

English script for *Frog, Where Are You?* by Mercer Mayer (1969)

Page	Script
1	There once was a boy who had a dog and a pet frog. He kept the frog in a large jar in his bedroom.
2	One night while he and his dog were sleeping, the frog climbed out of the jar. He jumped out of an open window.
3	When the boy and the dog woke up the next morning, they saw that the jar was empty.
4	The boy looked everywhere for the frog. The dog looked for the frog too. When the dog tried to look in the jar, he got his head stuck.
5	The boy called out the open window, "Frog, where are you?" The dog leaned out the window with the jar still stuck on his head.
6	The jar was so heavy that the dog fell out of the window headfirst!
7	The boy picked up the dog to make sure he was ok. The dog wasn't hurt but the jar was smashed.
8-9	The boy and the dog looked outside for the frog. The boy called for the frog.
10	He called down a hole in the ground while the dog barked at some bees in a beehive.
11	A gopher popped out of the hole and bit the boy on right on his nose. Meanwhile, the dog was still bothering the bees, jumping up on the tree and barking at them.
12	The beehive fell down and all of the bees flew out. The bees were angry at the dog for ruining their home.
13	The boy wasn't paying any attention to the dog. He had noticed a large hole in a tree. So he climbed up the tree and called down the hole.
14	All of a sudden an owl swooped out of the hole and knocked the boy to the ground.
15	The dog ran past the boy as fast as he could because the bees were chasing him.
16	The owl chased the boy all the way to a large rock.

17	The boy climbed up on the rock and called again for his frog. He held onto some branches so he wouldn't fall.
18	But the branches weren't really branches! They were deer antlers. The deer picked up the boy on his head.
19	The deer started running with the boy still on his head. The dog ran along too. They were getting close to a cliff.
20-21	The deer stopped suddenly and the boy and the dog fell over the edge of the cliff.
22	There was a pond below the cliff. They landed with a splash right on top of one another.
23	They heard a familiar sound.
24	The boy told the dog to be very quiet.
25	They crept up and looked behind a big log.
26	There they found the boy's pet frog. He had a mother frog with him.
27	They had some baby frogs and one of them jumped towards the boy.
28-29	The baby frog liked the boy and wanted to be his new pet. The boy and the dog were happy to have a new pet frog to take home. As they walked away the boy waved and said "goodbye" to his old frog and his family.

Spanish Script for *Frog, Where Are You?* By Mercer Mayer (1969)

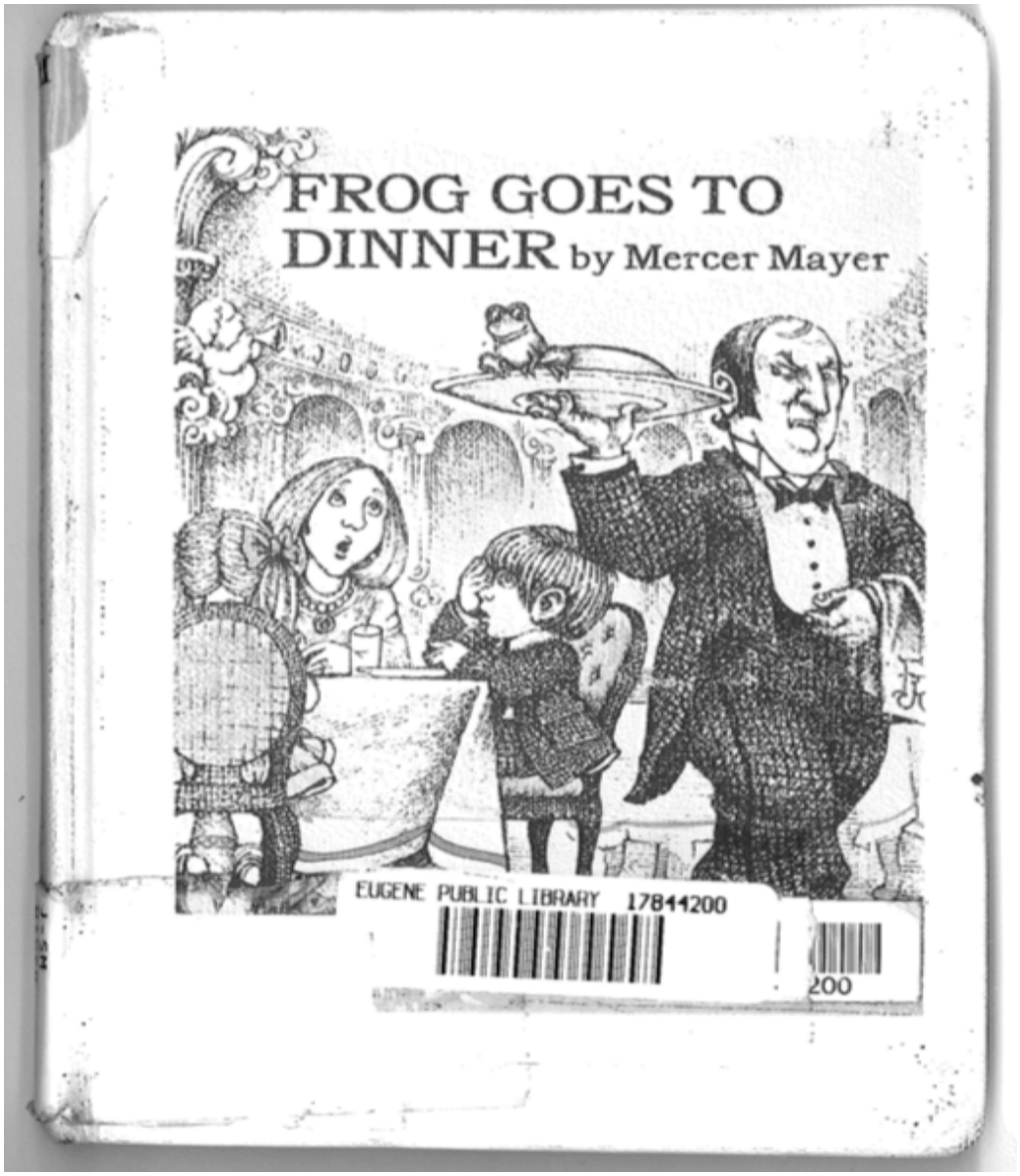
Spanish script for *Frog, Where Are You?* by Mercer Mayer (1969)

Página	Papel
1	Había un niño quien tenía un perro y una rana. El tenía la rana en su cuarto en un jarro grande a su rana.
2	Una noche cuando el niño y su perro estaban durmiendo, la rana se escapó del jarro. La rana se salió por una ventana abierta.
3	Cuando el niño y el perro se despertaron la siguiente mañana, vieron que el jarro estaba vacío.
4	El niño buscó en todas partes a la rana. Aún adentro de sus botas. El perro también buscó a la rana. Cuando el perro trató de mirar adentro del jarro y no podía sacar la cabeza.
5	El niño empezó a llamar desde la ventana abierta: "Rana, ¿Dónde estás?". El perro se asomó a la ventana con el jarro todavía en la cabeza.
6	¡El jarro estaba tan pesado que hizo que el perro se cayera de cabeza por la ventana!
7	El niño fue a ver como estaba el perro. El perro no estaba herido, pero el jarro se rompió.
8-9	El niño y el perro buscaron a la rana afuera de la casa. El niño llamó a la rana.
10	El niño llamaba a la rana en un hoyo que estaba en la tierra, mientras que el perro le ladraba a unas abejas en su panal.
11	Una ardilla salió de su hueco y mordió la nariz del niño por molestarla. Mientras tanto, el perro seguía molestando a las abejas, brincaba hacia el árbol y les ladraba.
12	El panal de abejas se cayó y las abejas salieron volando. Las abejas estaban enojadas con el perro.
13	El niño no prestó ninguna atención al perro. El vió un hueco grande en un árbol y quería ver si su rana se escondía allí. Así que trepó el árbol y llamó a la rana en el hueco para ver si estaba.
14	De repente un buho salió del hueco y lanzó al niño al suelo. El buho lo vió fijamente y le dijo que se fuera.

15	El perro pasó al niño corriendo tan rápido como pudo porque las abejas lo perseguían.
16	El buho persiguió al niño hasta una piedra grande.
17	El niño se encaramó en la piedra y llamó otra vez a la rana. Se agarró a unas ramas para no caerse de la piedra.
18	¡Pero las ramas no eran ramas reales! Eran los cuernos de un venado. El venado levantó al niño con su cabeza.
19	Y el venado empezó a correr con el niño que estaba todavía en su cabeza. El perro también corrió al lado del venado. Se acercaron a un precipicio.
20-21	El venado se paró de pronto y el niño y el perro se cayeron por el precipicio.
22	Había un estanque debajo del precipicio. Aterrizaron en el estanque uno encima del otro.
23	Oyeron un sonido que conocían.
24	El niño le dijo al perro que se callara.
25	Los dos se acercaron con cuidado y miraron detrás de un tronco de un árbol.
26	Allí encontraron a la rana del niño. Había con él una rana mamá también.
27	Ellos tenían algunas ranitas bebés y una de ellas saltó hacia el niño.
28-29	La ranita quería mucho al niño y quería ser su nueva mascota. El niño y el perro estaban felices de tener una nueva rana y llevarla a casa. Cuando se iban, el niño dijo adiós a la que fue su rana y también a su familia.

Appendix C: Picture Books Used For Data Collection

Frog Goes To Dinner by Mercer Mayer (1974)



FROG GOES TO DINNER

by Mercer Mayer

A Puffin Pied Piper

For Tereska and Bob

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Penguin Books USA Inc., 375 Hudson Street,
New York, New York 10014, U.S.A.
Penguin Books Ltd, 27 Wrights Lane, London W8 5TZ, England
Penguin Books Australia Ltd, Ringwood, Victoria, Australia
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Toronto, Ontario, Canada M4V 3B2
Penguin Books (N.Z.) Ltd, 182–190 Wairau Road,
Auckland 10, New Zealand
Penguin Books Ltd, Registered Offices: Harmondsworth,
Middlesex, England

Originally published in hardcover by
Dial Books for Young Readers
A Division of Penguin Books USA Inc.

Library of Congress Catalog Card Number: 74-2881
Printed in Hong Kong
First Puffin Pied Piper Printing 1977
ISBN 0-14-054633-2

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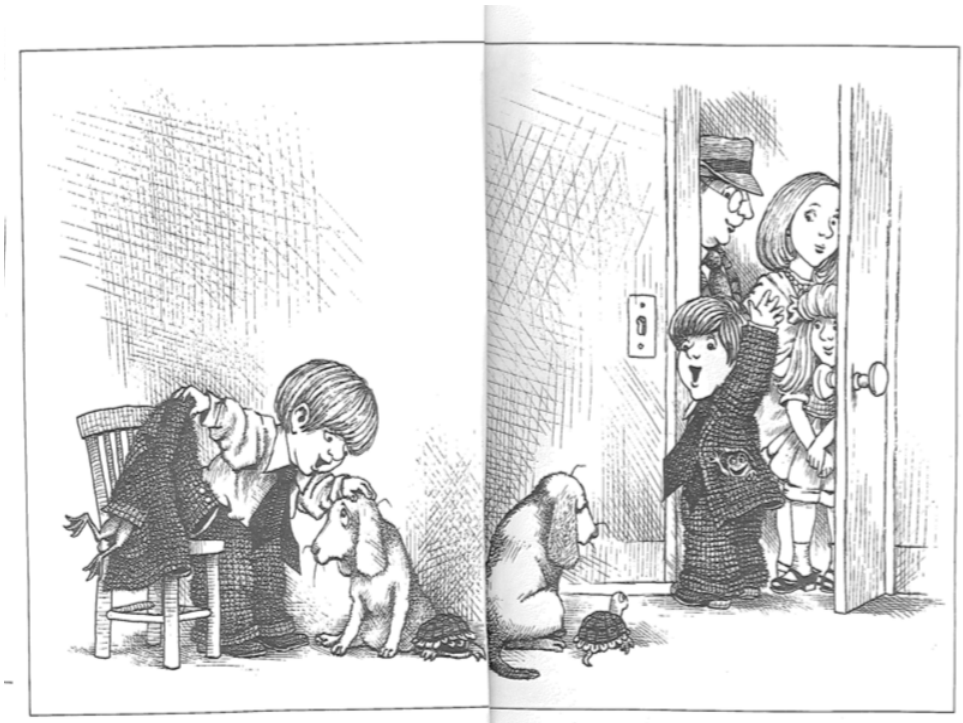
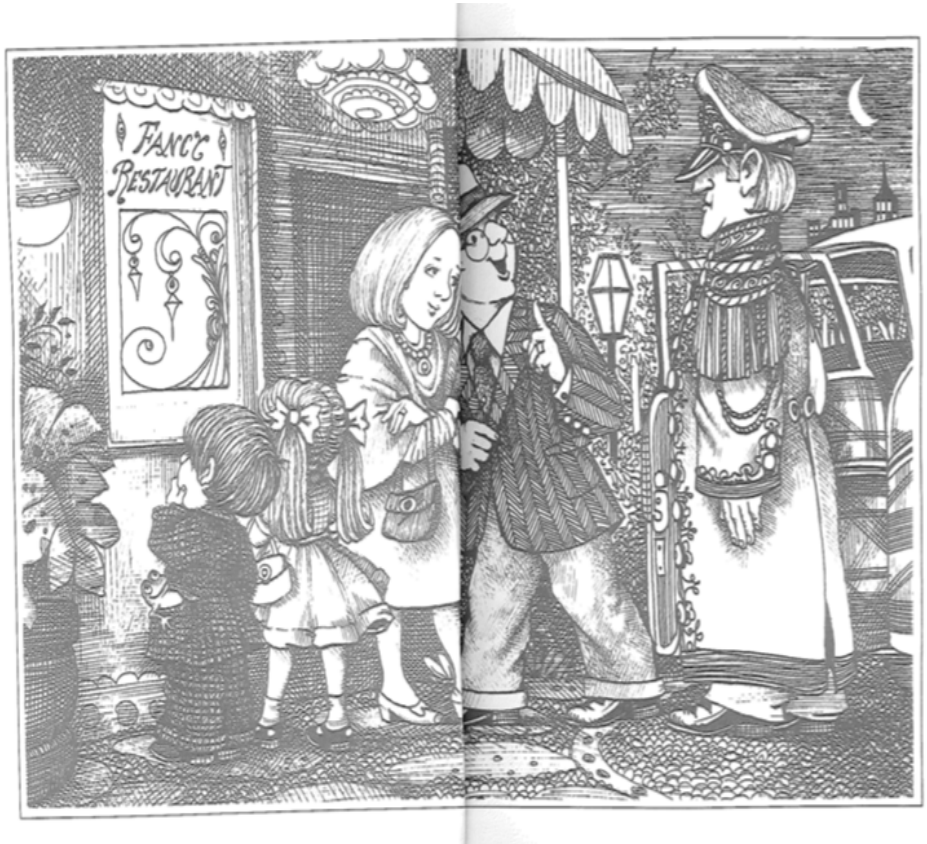
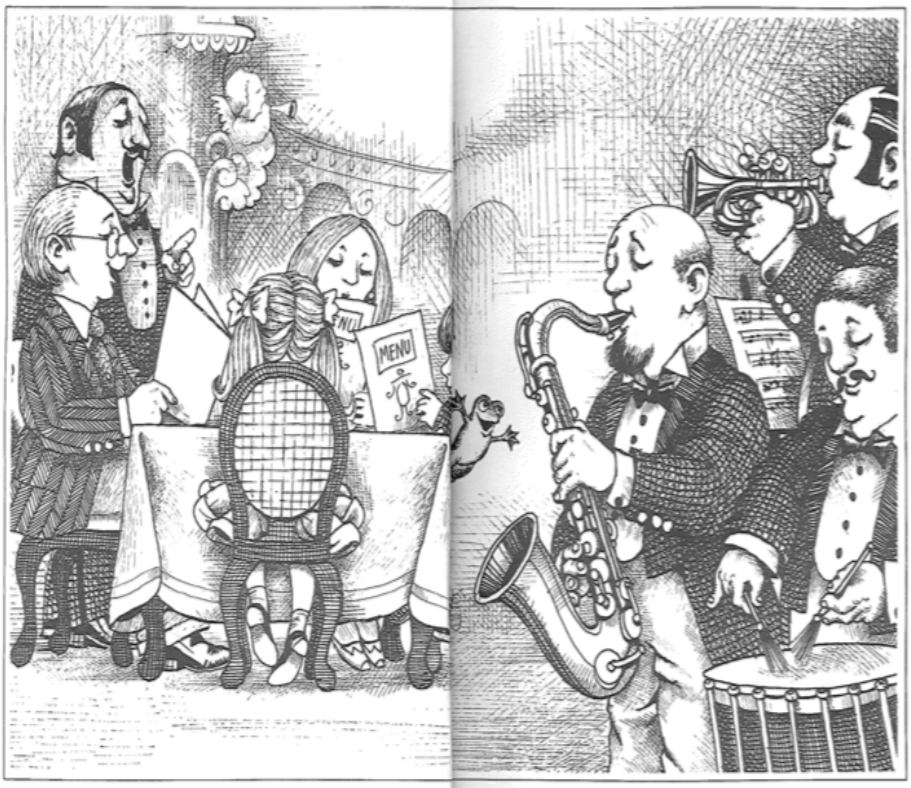



FANCY
RESTAURANT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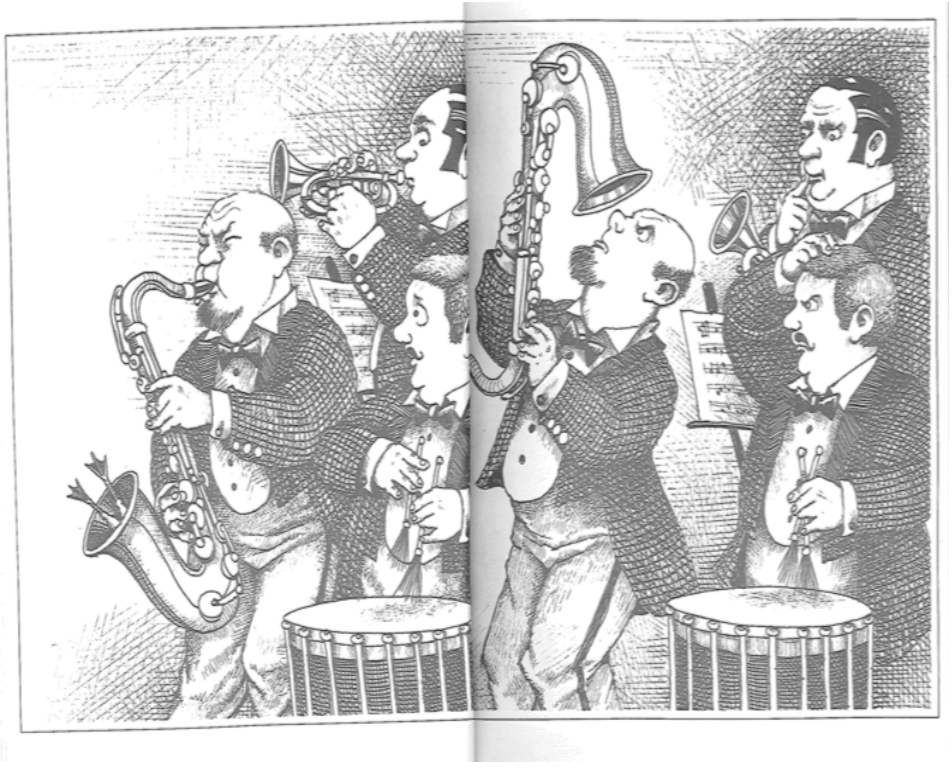

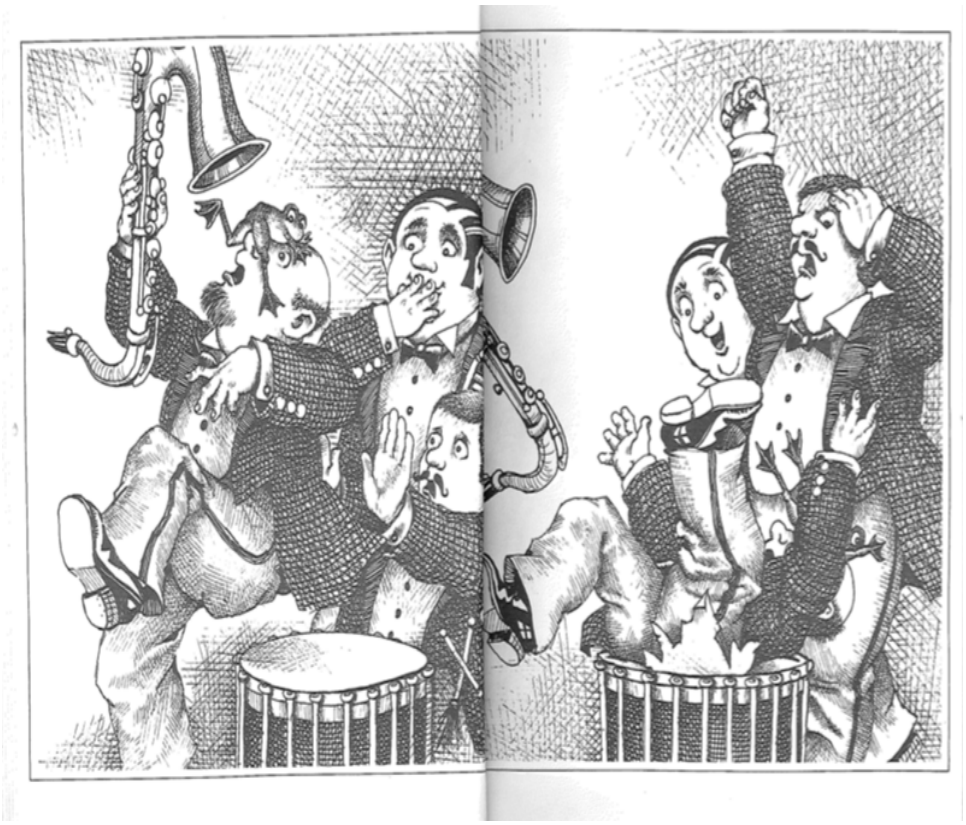

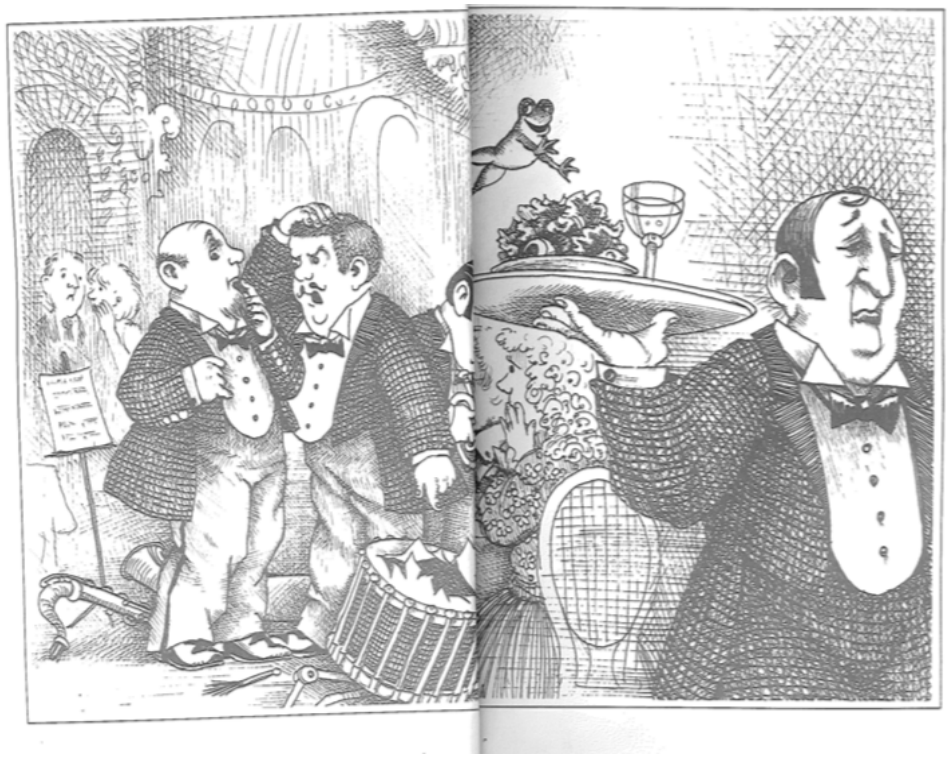

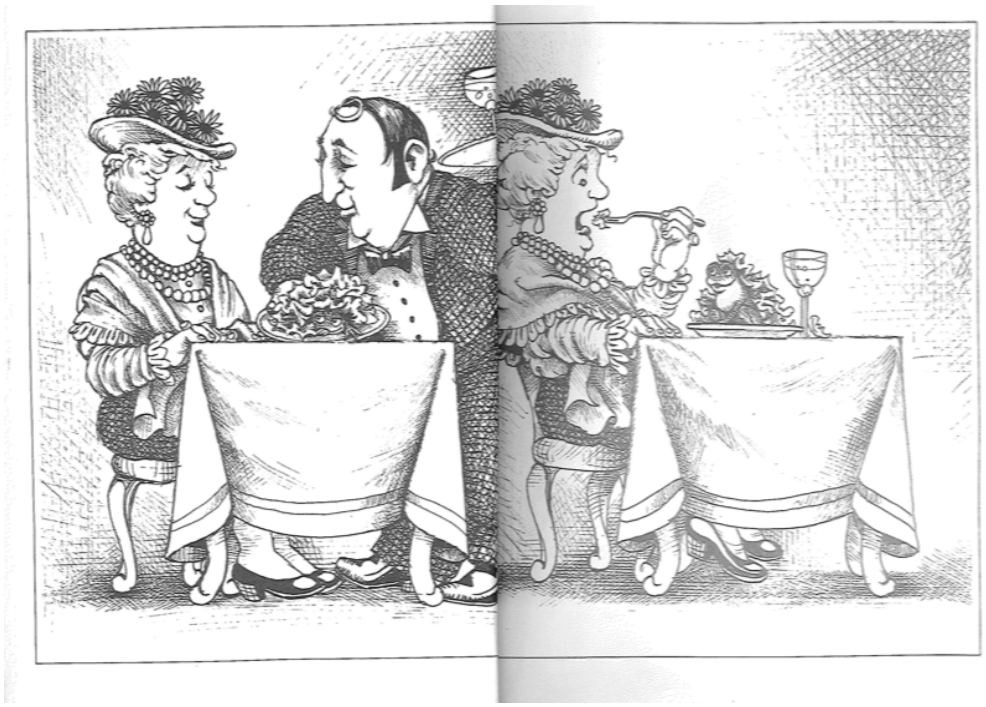

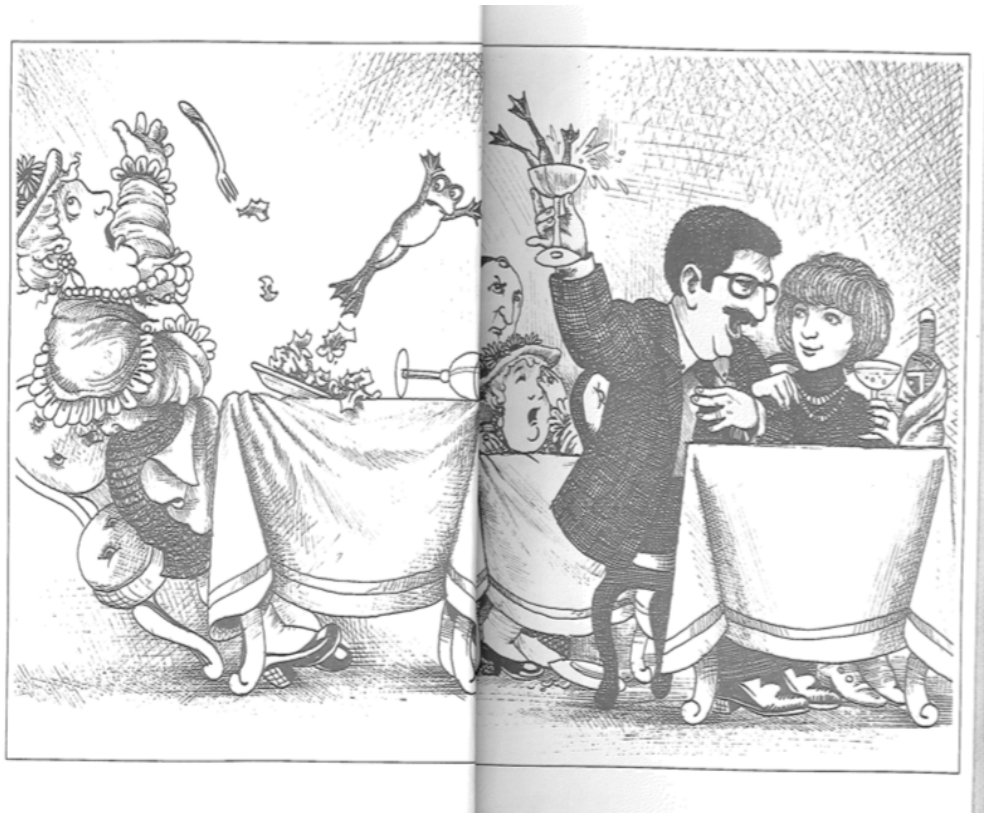

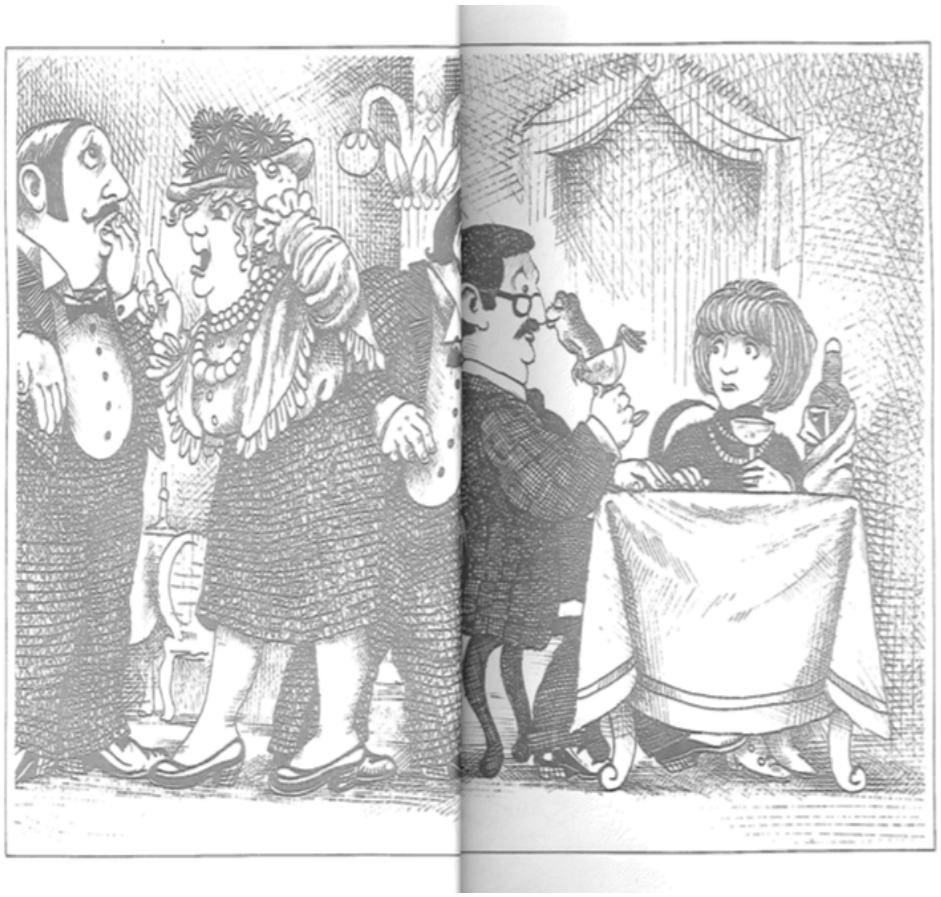

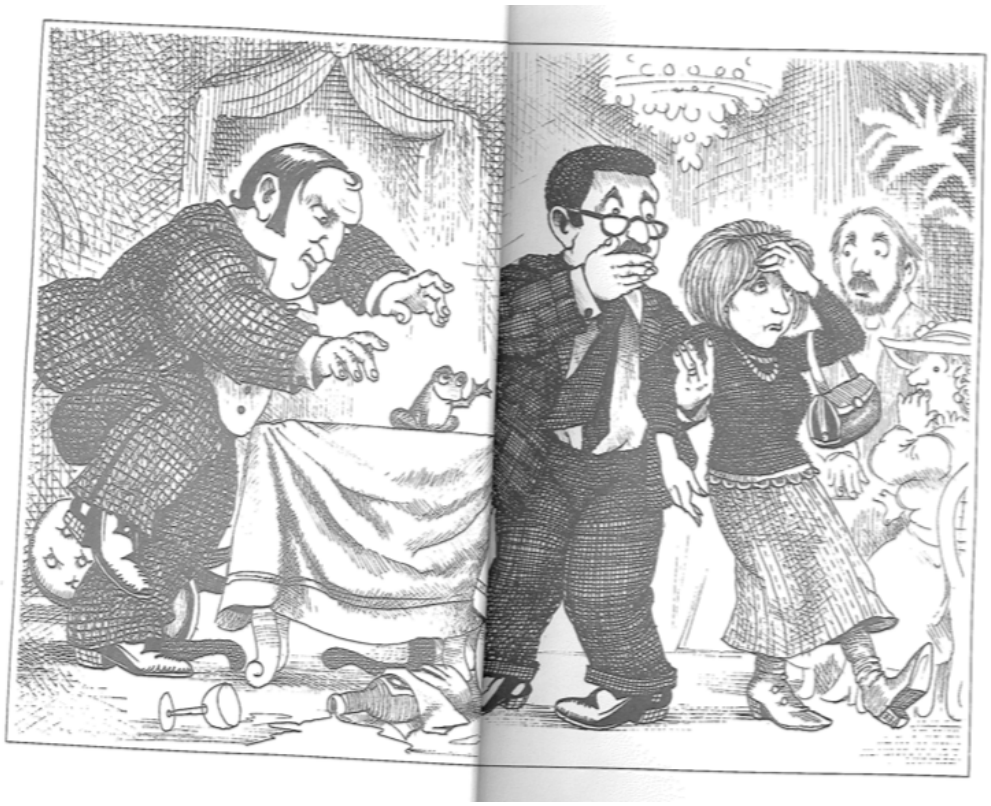

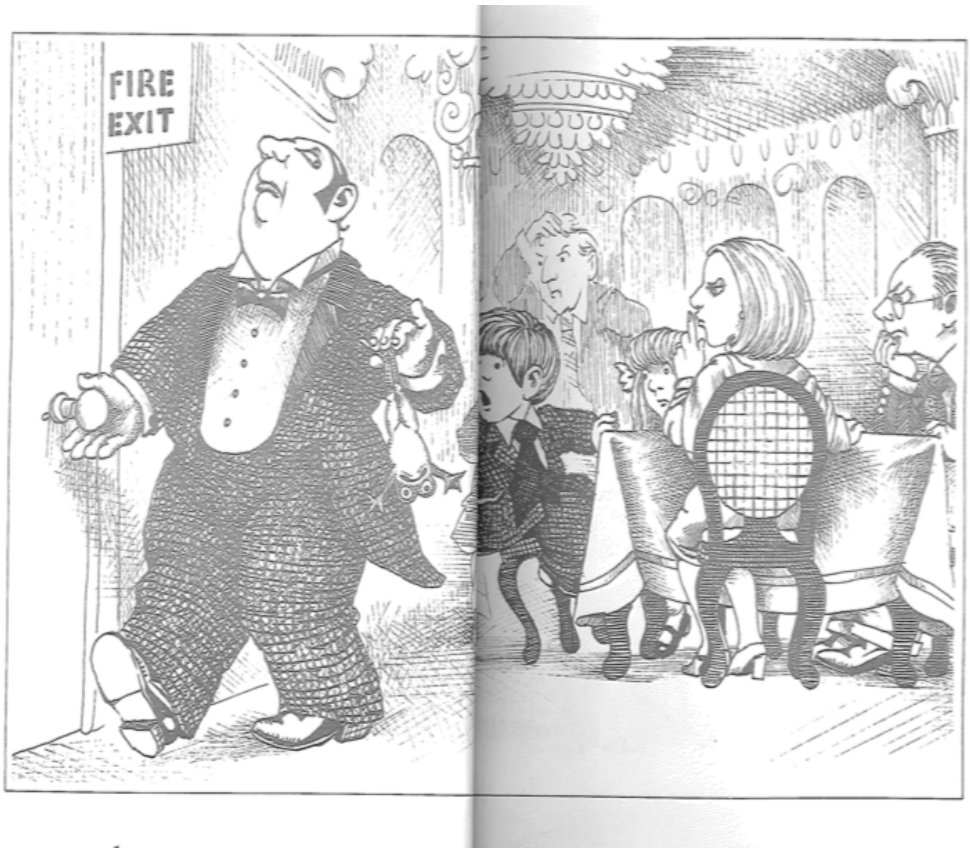
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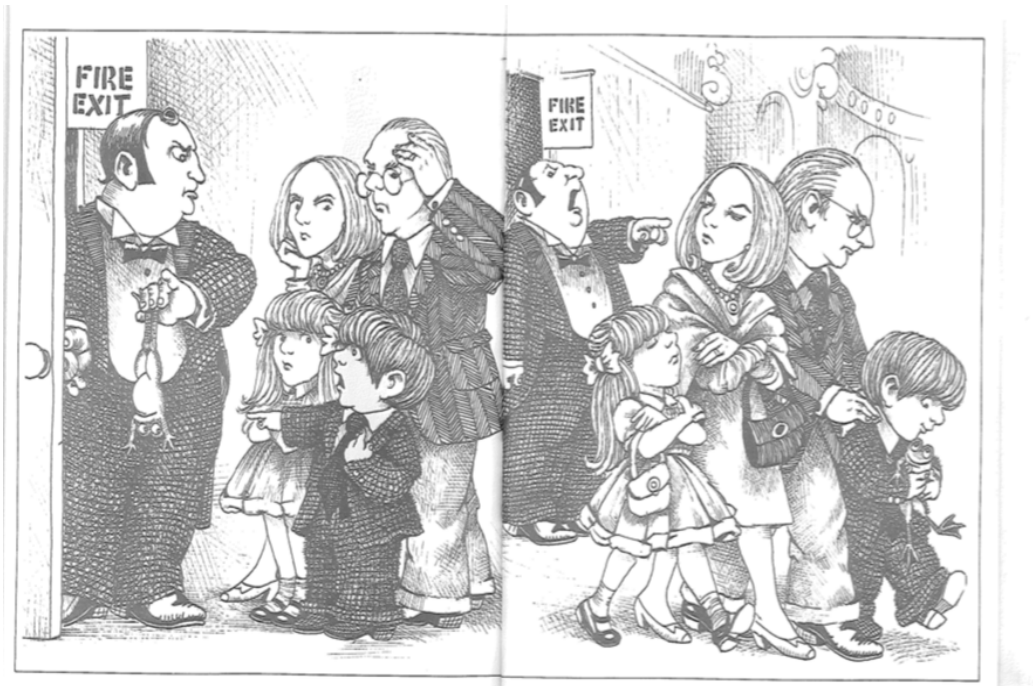
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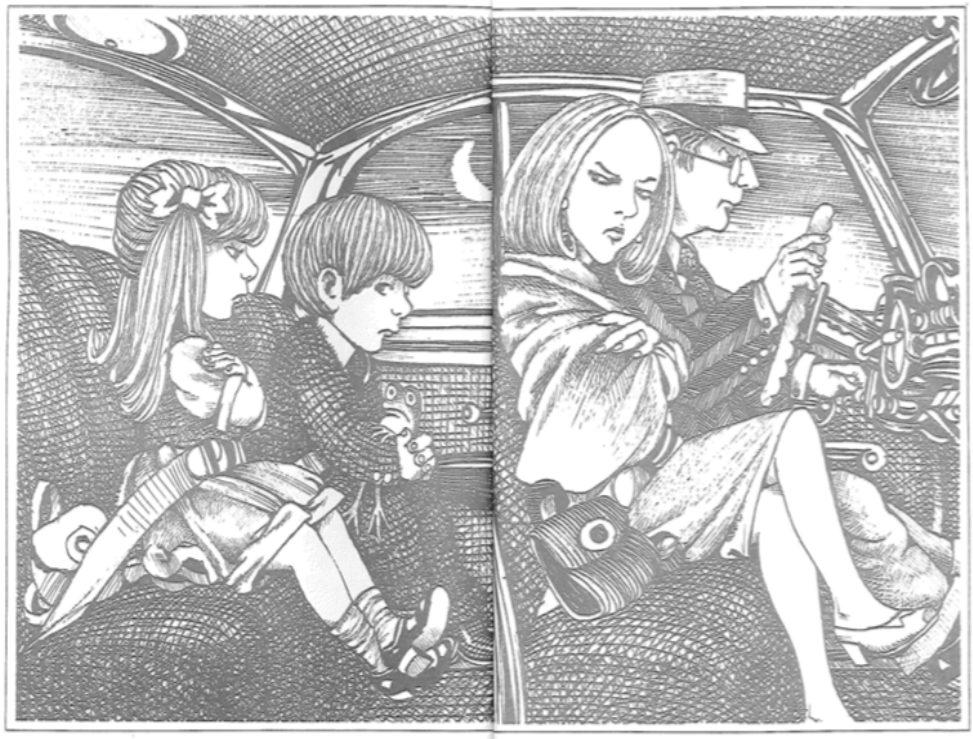
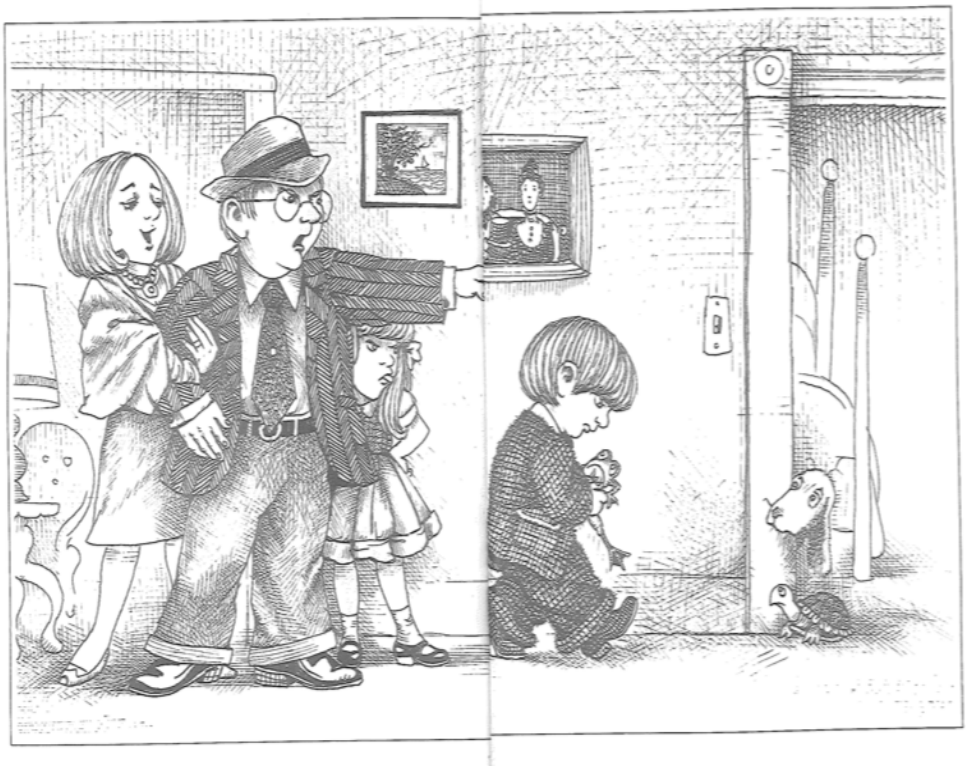
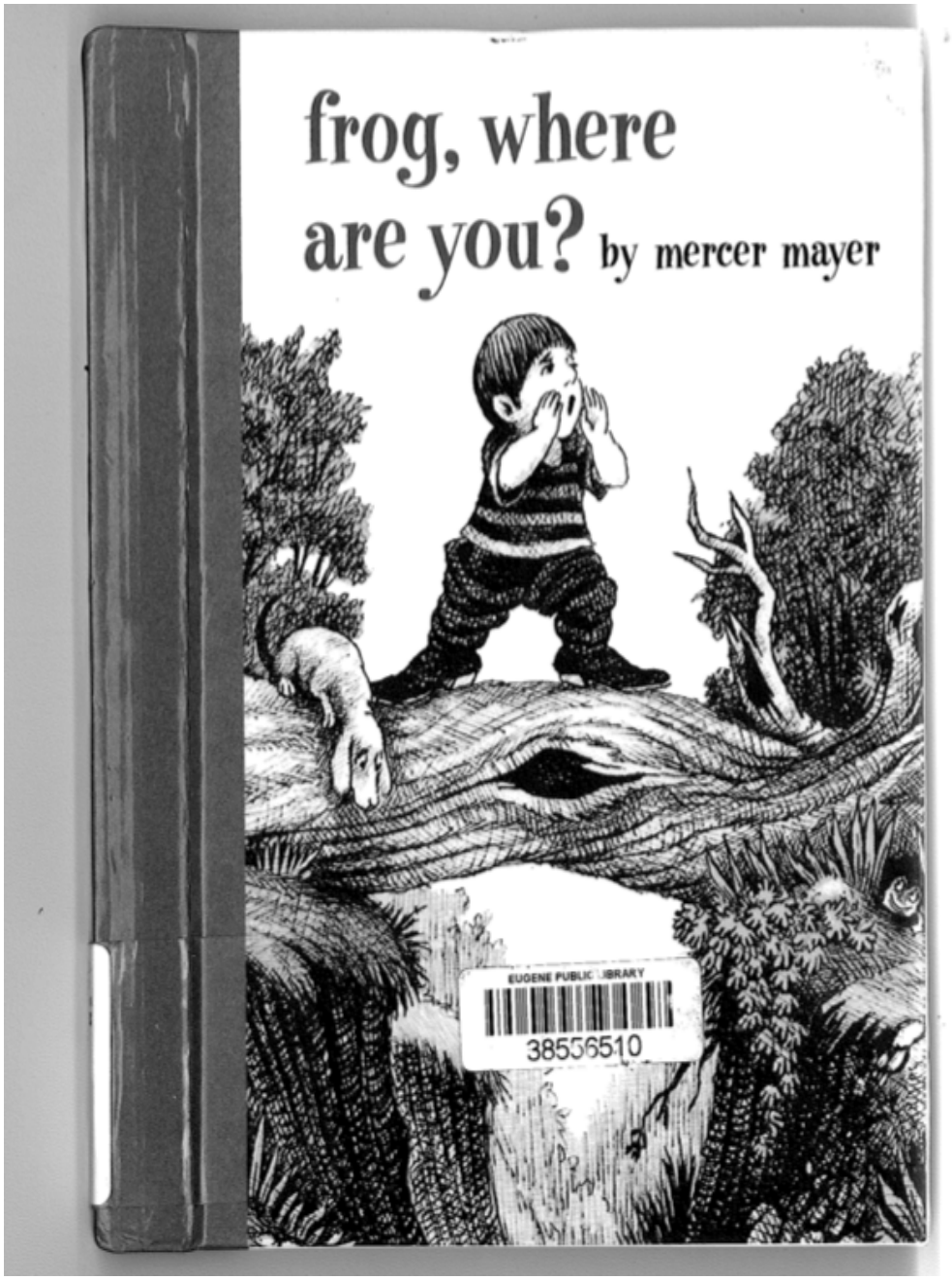




Frog, Where Are You? By Mercer Mayer (1969)



For Phyllis Fogelman,
a dear friend, who inspired
the creation of the faded
pink dummy

Published by Dial Books for Young Readers
A division of Penguin Putnam Inc.
345 Hudson Street
New York, New York 10014

ISBN 978-0-8037-2881-3
Library of Congress Catalog Card Number: 72-85544
Manufactured in China on acid-free paper

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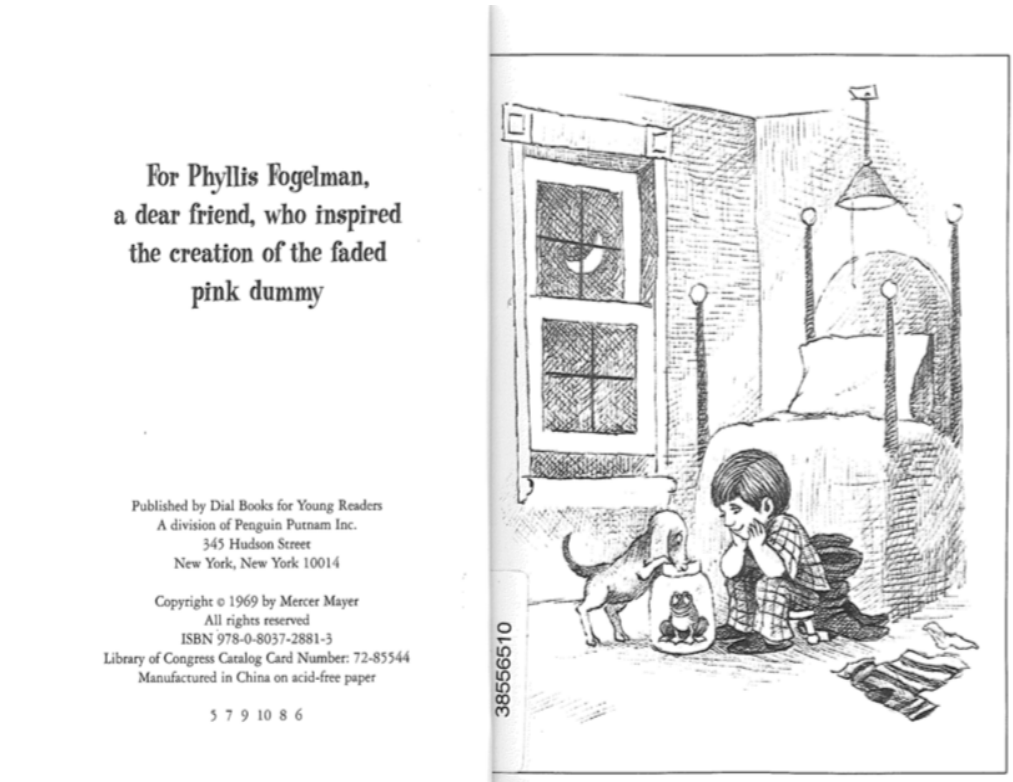

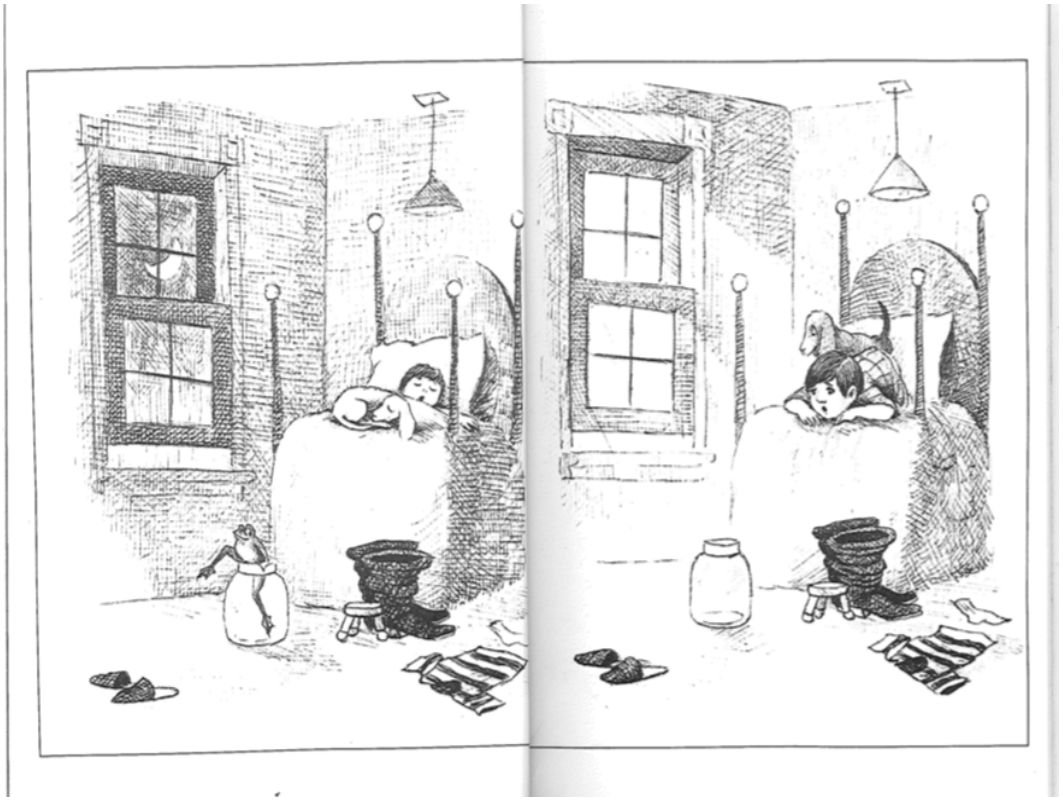

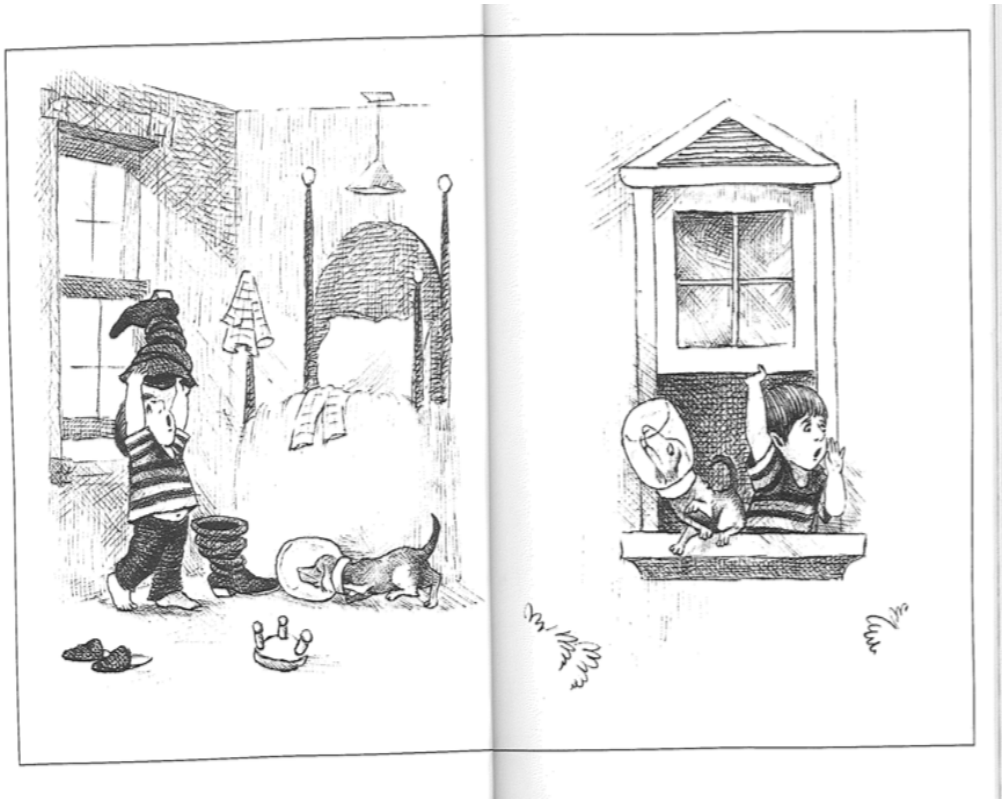

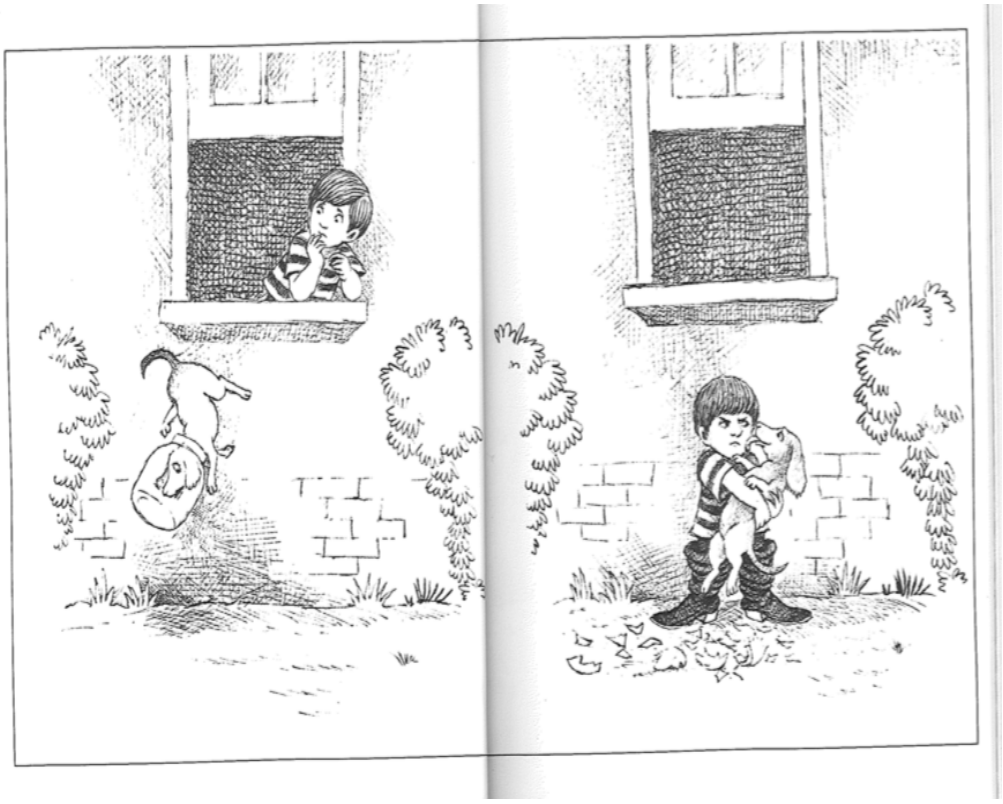

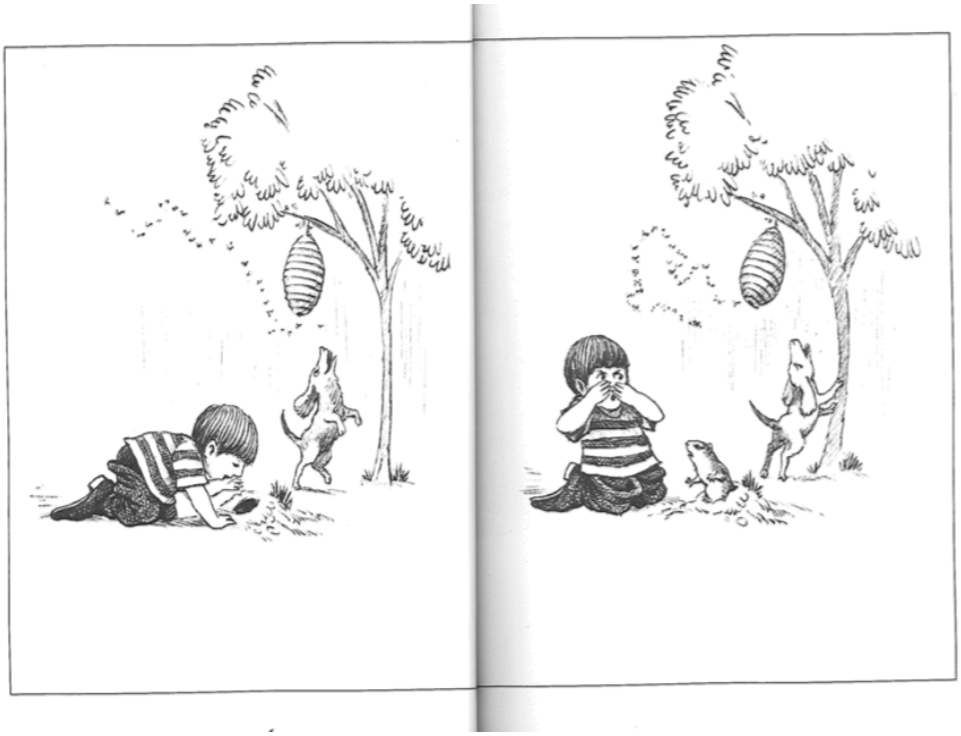

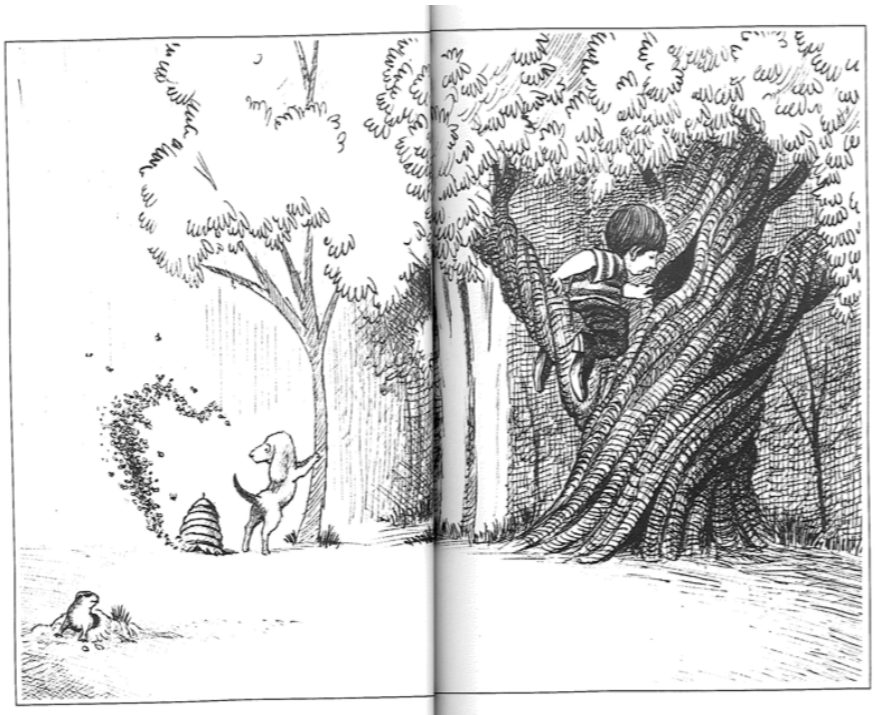

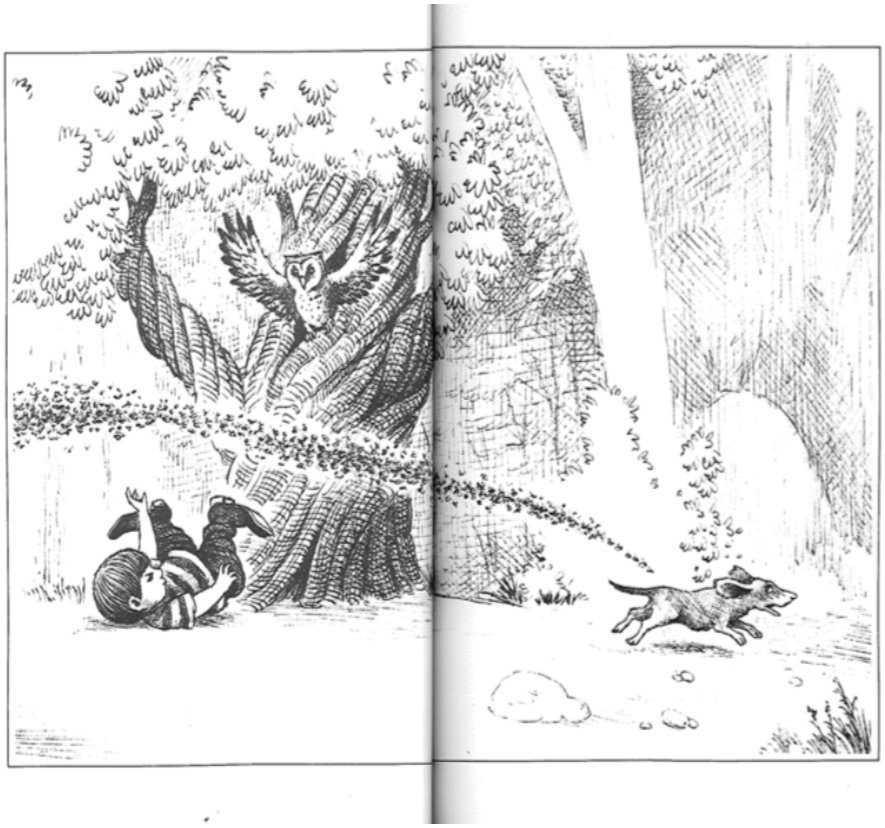

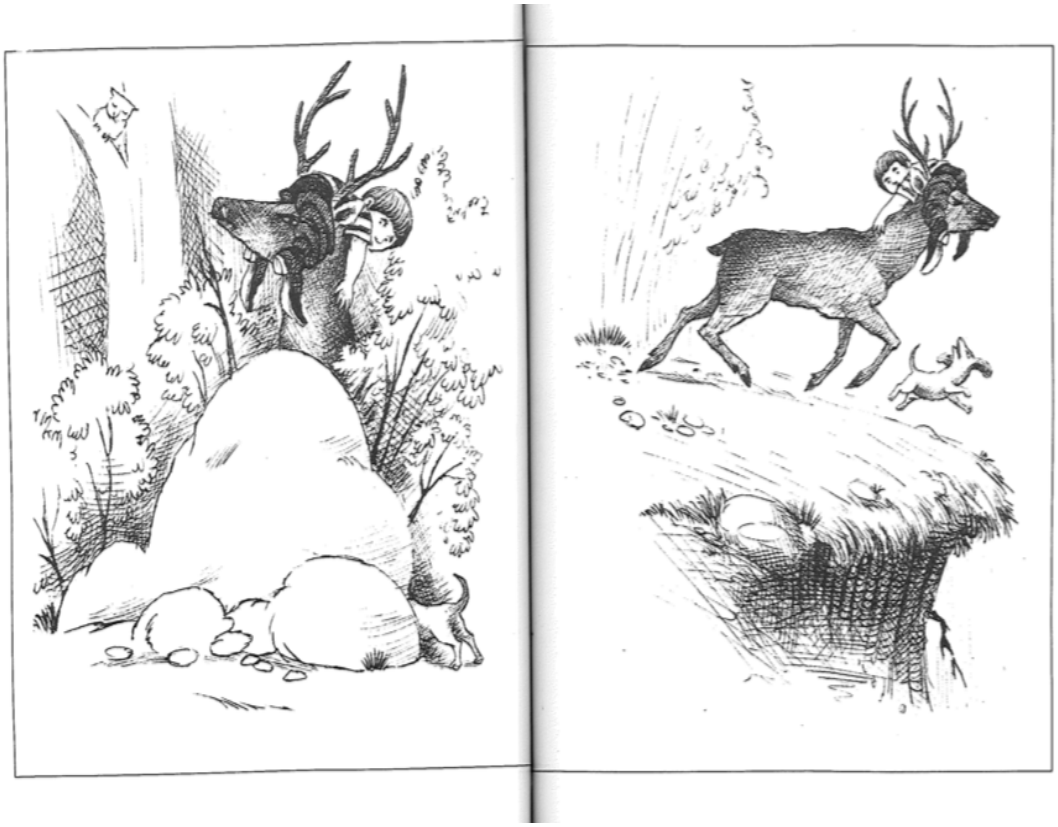

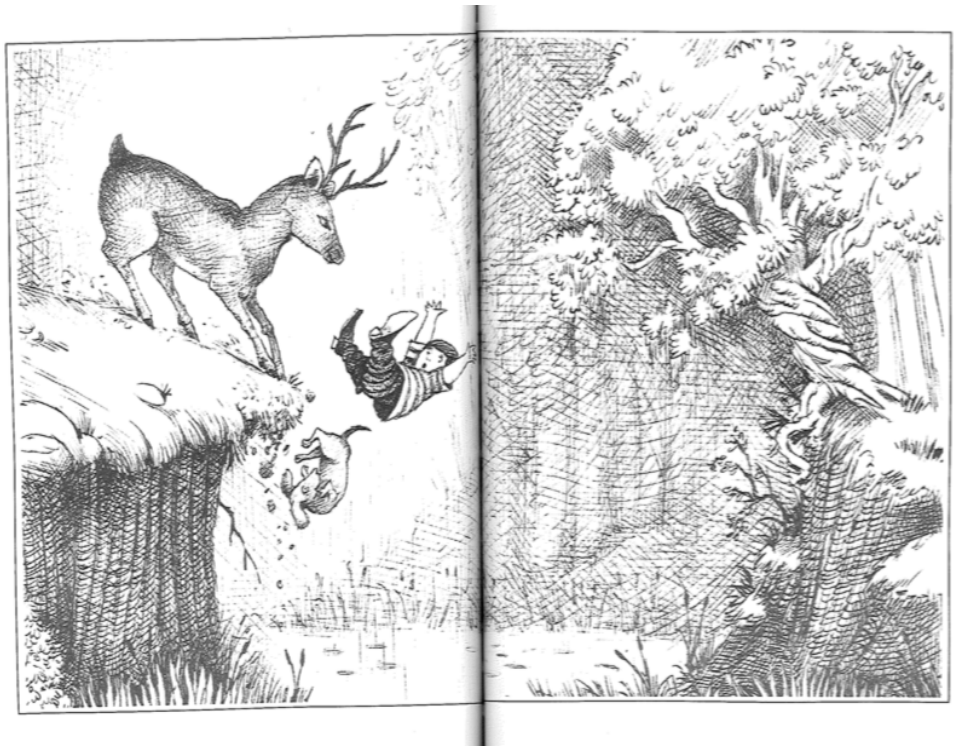

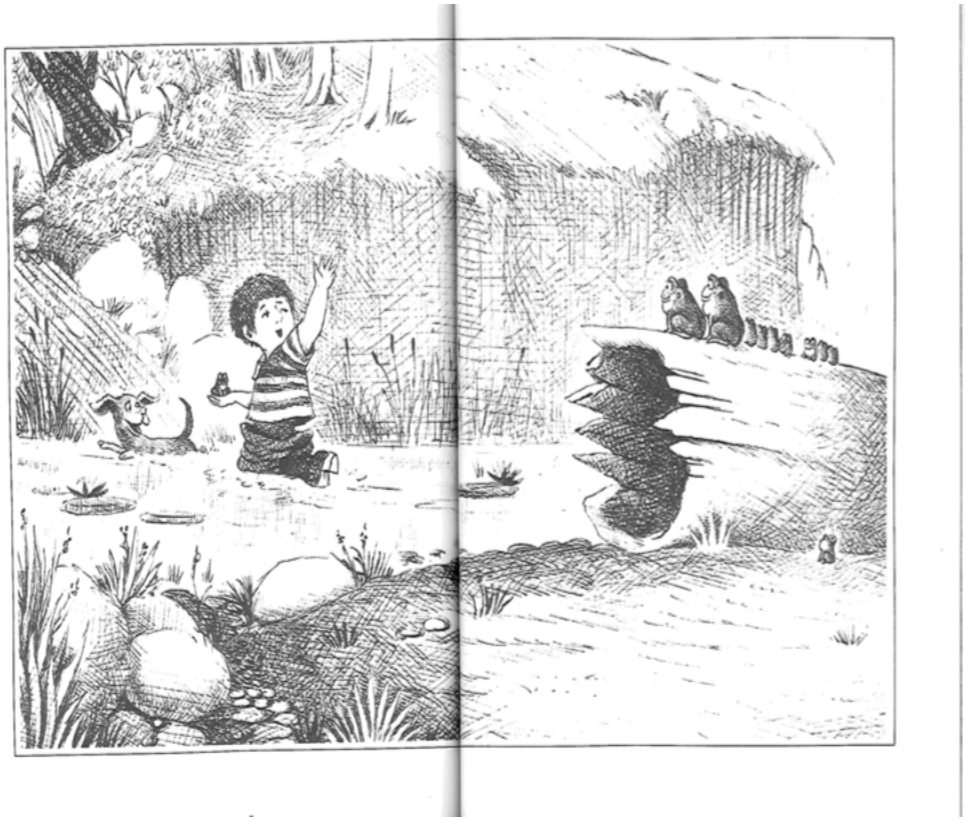

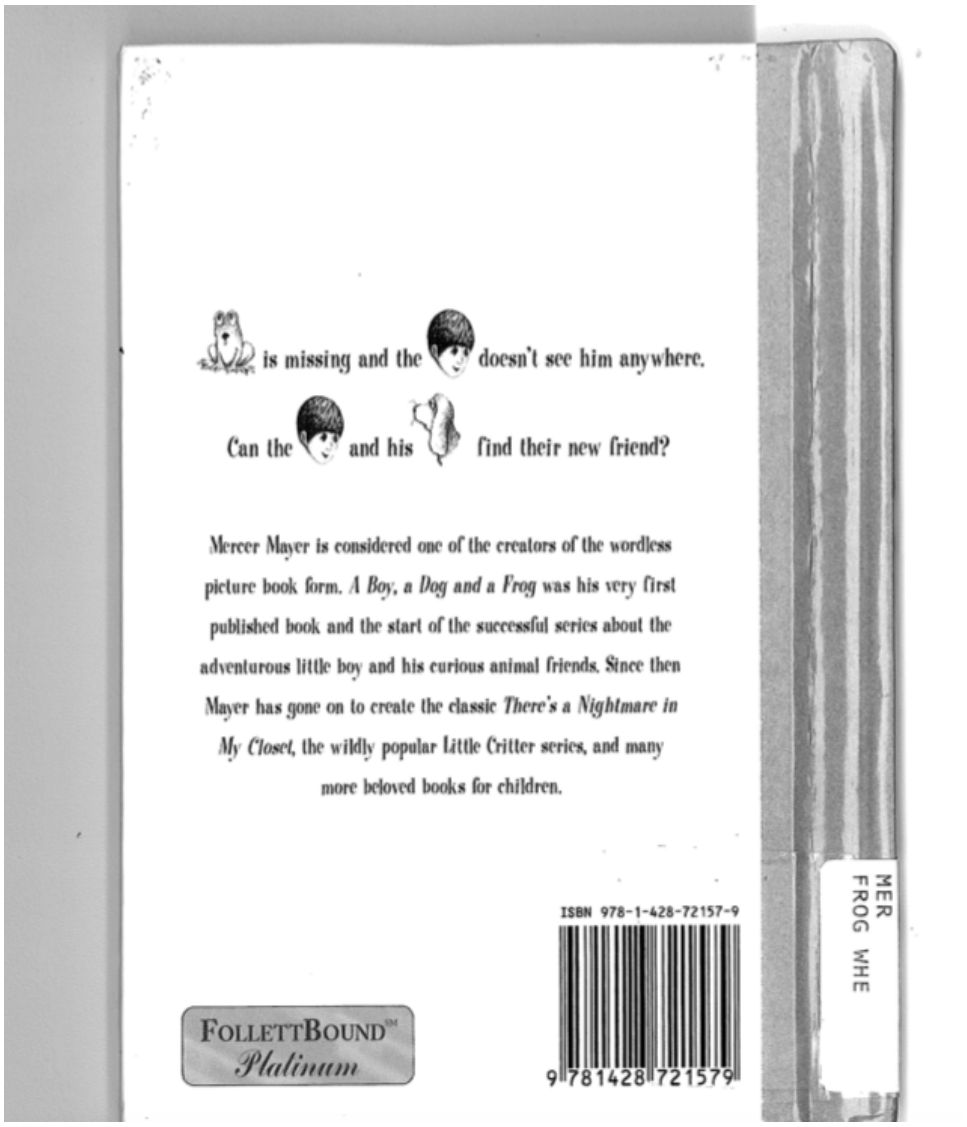
is missing and the doesn't see him anywhere.
Can the and his find their new friend?
Mercer Mayer is considered one of the creators of the wordless picture book form. A Boy, a Dog and a Frog was his very first published book and the start of the successful series about the adventurous little boy and his curious animal friends. Since then Mayer has gone on to create the classic There's a Nightmare in My Closet, the wildly popular Little Critter series, and many more beloved books for children.
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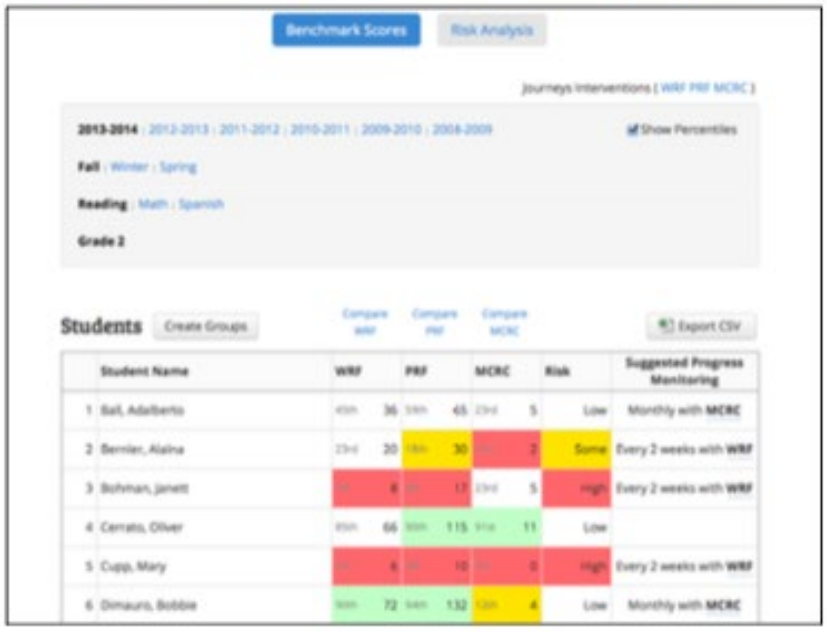
Appendix D: Relevant Excerpts from EasyCBM Manual

User's Manual

Sample Benchmark Report with Progress Monitoring Suggestions



Measure Descriptions

Reading Measures

The **reading assessments** include the following measures, which are based on the "Big Five" from the National Reading Panel:

- Alphabetic Principle (Phoneme Segmenting, Letter Names)
- Phonics (Letter Sounds)
- Fluency (Word Reading Fluency, Passage Reading Fluency)
- Vocabulary (Vocabulary)
- Comprehension (CCSS Reading, Multiple Choice Reading Comprehension)

Common Core reading measures are specifically designed to address aspects of reading comprehension not assessed through fictional narrative text. The measures include Read to Perform a Task, Informational Text, and Short Literary Text. While the MCRC measures are most

appropriate for use as screening assessments, the CCSS reading measures are more appropriate for Progress Monitoring, particularly for students with low comprehension skills.

Reading Curriculum Based Measures

These reading areas are based on the "Big Five" constructs of reading reported in the 2000 National Reading Panel report.								These reading areas are based on Common Core State Standards (CCSS).
	READING							READING
Grade	Phonemic Awareness	Letter Sounds	Letter Names	Word Fluency	Passage Fluency	Vocabulary	Reading Comprehension	Common Core (Read to Perform a Task, Informational Test, Short Literacy Text)
K	✓	✓	✓	✓				
1	✓	✓	✓	✓	✓			
2				✓	✓	✓	✓	
3				✓	✓	✓	✓	✓
4					✓	✓	✓	✓
5					✓	✓	✓	✓
6					✓	✓	✓	✓
7					✓	✓	✓	✓
8					✓	✓	✓	✓

The **reading measures** address the following reading components that are all critically important components identified by the National Reading Panel and outlined in the CCSS:

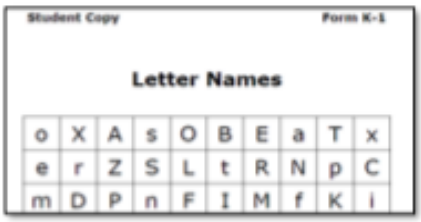
- early literacy (phonemic awareness and phonetic decoding)
- fluency
- comprehension
- vocabulary

The measures included in the **early literacy** component are Letter Names, Letter Sounds, and Phoneme Segmenting. All of these measures are fluency-based and consist of one minute, individually administered and scored timed tests. Each alternate form of the measure (for example, 17 Letter Names assessments) contains different combinations of letters and sounds. The teacher should not teach the letters specific to each assessment. The instructional focus should be on attaining proficiency with all upper- and lower-case letters and accompanying sounds.

The **Letter Names** test is included in the kindergarten and grade 1 measures and consists of both upper and lower case alphabet letters that are presented in an order based on empirical

evidence of their difficulty (Figure 1). The student is required to name the letters that are presented by row; all letter names that are identified correctly within a one-minute period constitute the raw score.

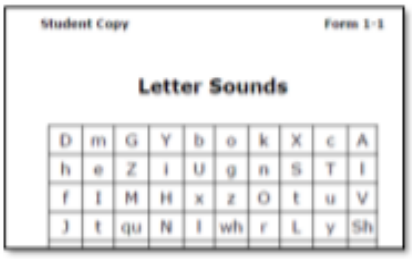
Figure 1: Sample Letter Names Measure (Kindergarten)



The Letter Sounds measure (kindergarten and grade 1) contains lower and upper case letters and letter pairs (

Figure 2) in an order based on empirical evidence of their difficulty. The student must identify the letter sound that is made by the letter(s). The total score is comprised of the sum of all correctly identified letter sounds named in one minute.

Figure 2: Sample Letter Sounds Measure (Grade 1)



The **Phoneme Segmenting** measure is included in the kindergarten and grade 1 assessments and contains items that require the student to identify the individual phonemes in each word that is orally presented by the teacher/examiner (

Figure 3). The total score is the total number of correct phonemes identified within a one-minute period.

Figure 3: Sample Phoneme Segmenting Measure (Kindergarten)

Item	Teacher Says	Student Says	Number Correct	Item	Teacher Says	Student Says	Number Correct
1	paid	/p/ /ai/ /d/	___ / 3	11	strap	/s/ /t/ /r/ /a/ /p/	___ / 5
2	shirt	/sh/ /ir/ /t/	___ / 3	12	futile	/f/ /u/ /t/ /i/ /e/	___ / 5

The fluency measures are **Word Reading Fluency** and **Passage Reading Fluency**. These measures assess fluency of words read in isolation and in context. Word Reading Fluency measures are included in the Kindergarten through third-grade assessments (Figure 4); Passage Reading Fluency measures range from grade 1 through grade 8 (Figure 5). Words for the Word Reading Fluency measures were selected from a variety of sources, including Dolch word lists, online grade-level word lists, and Fry's 'instant 1000 words.' They include words with both regular and irregular sound patterns and in a variety of lengths. The words were piloted in a large multi-grade study in 2006; the difficulty of each word was then calculated, and test forms were constructed to be equivalently difficult within each given grade.

As with the early literacy measures, the words contained in the Word Reading Fluency measures are presented in order of increasing difficulty and vary in complexity. Keeping in mind that CBMs are general outcome measure, the specific words should not be practiced. Rather, the instructional focus should be on teaching high frequency words and phonetic decoding skills so that students can access words quickly and efficiently. The total score for both Word Reading Fluency and Passage Reading Fluency is the number of words read correctly within a one-minute period.

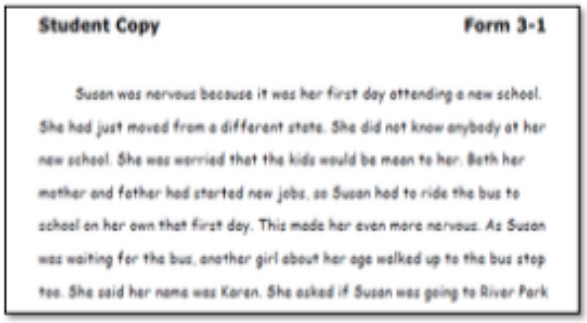
Figure 4: Sample Word Reading Fluency Measure (Grade 3)

Student Copy **Form 3-1**

Word Reading

I	way	great	all	sun	but	work	under
left	ball	below	always	took	new	move	who
side	dollars	found	passed	watch	rich	crops	another
father	history	isn't	ready	amount	trails	matter	waves
shape	early	clear	sense	cannot	taxes	square	vowel
base	single	difference	even	ago	suddenly	pair	cattle

Figure 5: Sample Passage Reading Fluency Measure (Grade 3)



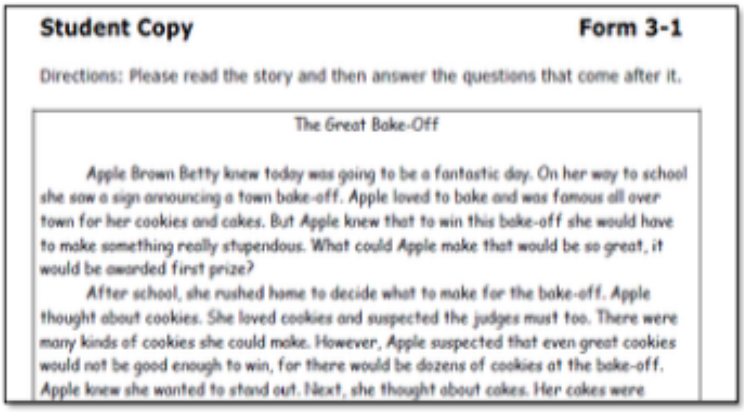
Student Copy **Form 3-1**

Susan was nervous because it was her first day attending a new school. She had just moved from a different state. She did not know anybody at her new school. She was worried that the kids would be mean to her. Both her mother and father had started new jobs, so Susan had to ride the bus to school on her own that first day. This made her even more nervous. As Susan was waiting for the bus, another girl about her age walked up to the bus stop too. She said her name was Karen. She asked if Susan was going to River Park

The **Multiple Choice Reading Comprehension** measure (MCRC) is an untimed assessment that measures student comprehension of written text (Figure 6). These measures are designed for students in grades 2–8. Multiple choice questions at the end of the passage assess students' literal, inferential, and (in grades 3–8) evaluative comprehension of text.

Students can complete these measures via paper-and-pencil or online. Each MCRC test takes approximately 30 minutes to complete. The total score is the number of correct responses that the student provides. A percent score (percent of items correctly answered) as well as an item analysis (number of items correctly answered, categorized by item type) are provided in item-level reports, in addition to the total score. It is important that the percentile rank that corresponds with a particular raw score, not the raw score itself or the percent correct, be used when interpreting student performance. The MCRC measures are, by design, the most challenging of the *easyCBM* reading measures.

Figure 6: Sample Multiple Choice Reading Comprehension Measure (Grade 3)



Student Copy **Form 3-1**

Directions: Please read the story and then answer the questions that come after it.

The Great Bake-Off

Apple Brown Betty knew today was going to be a fantastic day. On her way to school she saw a sign announcing a town bake-off. Apple loved to bake and was famous all over town for her cookies and cakes. But Apple knew that to win this bake-off she would have to make something really stupendous. What could Apple make that would be so great, it would be awarded first prize?

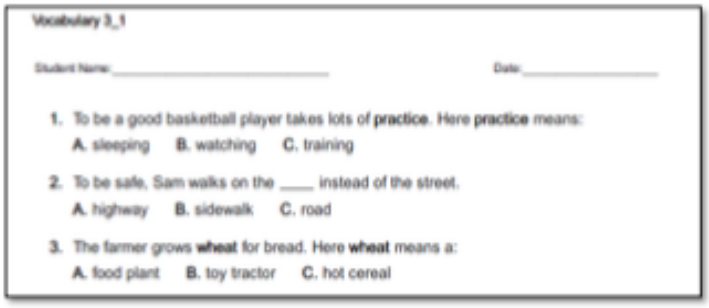
After school, she rushed home to decide what to make for the bake-off. Apple thought about cookies. She loved cookies and suspected the judges must too. There were many kinds of cookies she could make. However, Apple suspected that even great cookies would not be good enough to win, for there would be dozens of cookies at the bake-off. Apple knew she wanted to stand out. Next, she thought about cakes. Her cakes were

The **Vocabulary** measures (grades 2–8) are intended to measure vocabulary proficiency

appropriate for a student's grade level (

Figure 7). The words included in the Vocabulary measures were selected from a variety of content materials and were extensively field-tested. The bank of items represents a wide range of difficulty all aligned to grade-level content standards. The test can be administered via paper-and-pencil or online and takes approximately 10 to 15 minutes to complete. The total score is the number of correct responses that the student provides. As with the other *easyCBM* measures, it is important that the percentile rank that corresponds with a particular raw score, not the raw score itself, be used when interpreting student performance, and that teachers not use the vocabulary tests as study guides or to identify vocabulary words for specific instruction with their students.

Figure 7: Sample Vocabulary Measure (Grade 3)

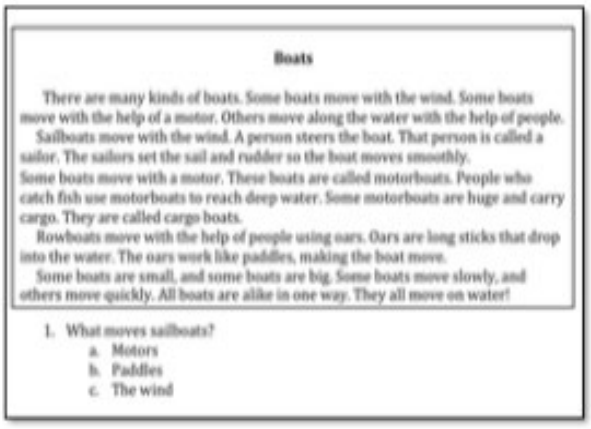

Vocabulary 3_1

Student Name:_____ Date:_____

1. To be a good basketball player takes lots of **practice**. Here **practice** means:
   A. sleeping B. watching C. training
2. To be safe, Sam walks on the ____ instead of the street.
   A. highway B. sidewalk C. road
3. The farmer grows **wheat** for bread. Here **wheat** means a:
   A. food plant B. toy tractor C. hot cereal

The **CCSS Reading measures** include **Read to Perform a Task**, **Informational Text**, and **Short Literary Text** passages. They are comprehension assessments utilizing a variety of text. For example, informational text (Figure 8), literary text (Figure 9), and read to perform a task (Figure 10) are all drawn from one of the CCSS Reading measures. Each of the measures includes five short prompts with five corresponding questions; the total score is the number of items answered correctly out of a possible 25. Again, it is important that the percentile rank that corresponds with a particular raw score, not the raw score itself, be used when interpreting student performance. The CCSS Reading tests can be administered via paper-and-pencil or online and are components of the grades 3-8 measures. **Note: these measures are most appropriate for monitoring the progress of students who are experiencing significant difficulties with reading comprehension.**

Figure 8: Sample Informational Text Measure



Boats

There are many kinds of boats. Some boats move with the wind. Some boats move with the help of a motor. Others move along the water with the help of people.

Sailboats move with the wind. A person steers the boat. That person is called a sailor. The sailors set the sail and rudder so the boat moves smoothly.

Some boats move with a motor. These boats are called motorboats. People who catch fish use motorboats to reach deep water. Some motorboats are huge and carry cargo. They are called cargo boats.

Rowboats move with the help of people using oars. Oars are long sticks that drop into the water. The oars work like paddles, making the boat move.

Some boats are small, and some boats are big. Some boats move slowly, and others move quickly. All boats are alike in one way. They all move on water!

1. What moves sailboats?
   a. Motors
   b. Paddles
   c. The wind

Figure 9: Sample Short Literary Text Measure

Max, the Talking Cat

Imagine a cat that talks! Lucy's friend has a big, furry cat named Max. Max purrs with vigor and makes a variety of sounds. His sounds remind Lucy of words.

Lucy goes to her friend's house for a visit. Max greets her at the door. He nuzzles against her leg to say, "Hello." Lucy bends down and pets Max. He purrs loudly. It seems like he is saying, "Nice!" She walks into the house. First, Max follows her. Then, he runs ahead, like he is saying, "Hurry!"

Lucy likes to visit her friend and Max. She thinks Max is a very unusual cat. She likes to think about Max learning new words. Maybe someday Max will say her name "Lucy." That will be a great day!

1. Who says, "Hello," "Nice!" and "Hurry!" ?
   a. Lucy
   b. Max
   c. Friend

Figure 10: Sample Read to Perform a Task Measure

Passage Reading Fluency (PRF) – First Grade through Eighth Grade

1. Read the directions to the student exactly as written on the Assessor Copy.
2. Go over all proper nouns in the passage before beginning the timing.
3. This is a **one minute timed test**.
4. Begin timing when the student says the first word of the reading passage.
5. Place a bracket after the last word read before time expires.
6. If the student does not read any words correctly in the first line of the first passage, discontinue the task and record a score of zero.
7. Omitted words are scored as incorrect and marked with a slash through the word.
8. If a student hesitates or struggles with a word for 3 seconds, tell the student the word and mark the word as incorrect.
9. If the student makes an error then self corrects within 3 seconds the assessor writes "SC" above the word and it is *not* counted as an error.
10. Inserted words are ignored and not counted as errors.
11. At the end of the test, the Assessor should fill in the spaces indicating Total Words Read, Errors, and Total Correct Words.

You have the option to enter student responses directly into a tablet rather than marking an assessor copy and entering scores later. The system is optimized for use with iPads and has also been successfully used with a variety of other tablet devices; please check compatibility with your specific tablet in advance of using with students. When using an iPad, you need only the student copy of the test and a single assessor copy (for reading the standardized administration instructions aloud to the students), as the online user interface includes the assessor copy as well as a stopwatch, which you activate when you begin administering the test.

After the test is complete and the responses are entered for each student, you press "Save" to ensure that each student's scores are saved.

To enter and score student responses, click on the "Enter Scores" link and select the group for which scores will be entered, as shown in the figure below. Information about how to enter scores for each test is available on the tab "Show Instructions."

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