

# Summative Evaluation of *Between the Lions*:

A Final Report to WGBH Educational Foundation

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This research was supported in part through a service agreement with WGBH Educational Foundation. The author is appreciative of that support. The views expressed by this author are her own, based on the research, and do not necessarily reflect those of WGBH Educational Foundation or the University of Kansas.

This author thanks the talented and dedicated efforts of staff and students who helped to make this project successful. Among them are Denise Chowning, Nii Sai Doku, Patty Eskrootchi, Charles Greenwood, Kere Hughes, Anjelika Kosanic, Rhett Larsen, Gayle Luze, Ken Parsley, and Vicki Peyton.

Finally, this project would not have been possible without the support of the three school districts, principals, teachers, children and families in the greater Kansas City area who participated. They all gave significant time, energy, and enthusiasm to help us complete this endeavor.

# JUNIPER GARDENS CHILDREN'S PROJECT

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A COOPERATIVE EFFORT OF  
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## Summative Evaluation of *Between the Lions*

### EXECUTIVE SUMMARY

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### Background and Purpose of Study

This report summarizes the key results from an experiment evaluating the effects of viewing approximately half of the first season of *Between the Lions (BTL)*. The purpose was to determine the program's ability to effectively help children acquire essential skills associated with emergent literacy (i.e., concepts of print, phonemic awareness, letter-sound correspondences) as well as assess the appeal of this program for young children. Specifically, did this program produce positive changes in the acquisition of emergent literacy skills for kindergarten and first grade children and did they like the program?

### Method

- 164 kindergarten ( $n = 79$ ,  $M_{age} = 6.02$  years) and first grade children ( $n = 85$ ,  $M_{age} = 7.10$  years) in the greater Kansas City metro area participated in this study.
- Eighty-one percent were European American, 7% were Hispanic, 6% were African American, and 5% were from other backgrounds. Thirty-six percent of the families reported incomes below \$30,000, 28% reported incomes between \$30,000 and \$45,000, and 36% reported incomes above \$45,000.
- Assignment to control or experimental groups was completed using stratified sampling by classroom and grade. The experiment consisted of viewing 17 half-hour episodes of *BTL* from the end of February 2000 to the beginning of April 2000.
- Children in both groups were evaluated at three time points: prior to the viewing phase, after viewing 8 episodes, and after viewing all 17 episodes.
- Measures included:
  - questionnaires recording basic family demographic information and access to media
  - learning outcomes on tasks assessing children's knowledge of concepts of print, phonemic awareness, and letter-sound correspondences as it related to:
    - § specific program content
    - § transfer of this content to growth in key early literacy skills
    - § normative growth on a general test of reading achievement
  - child interviews about the appeal of the program and the characters
  - parent-reported frequency of media activities in the home
  - teacher-reported frequency of media behaviors in the classroom.

- Statistical controls correcting for the child's initial ability and parent's education were included in all analyses. Control variables regularly account for many of the individual differences in the outcome measures. Therefore, these analyses represent a stringent test of the effects associated with viewing this program.

## Key Findings

### Learning Outcomes<sup>1</sup>

#### *Specific program content:*

- Kindergarten children who watched *BTL* outperformed kindergarten children who did not watch *BTL* by nearly 4 to 1 on measures of specific program content. Skills measured included phonemic awareness, letter-sound correspondences, and concepts of print. Average performance from pre-test to post-test improved 50% for those who viewed the program and only 13% for those who did not view the program.

#### *Transfer of this content to growth in key early literacy skills:*

- Letter identification: Kindergarten children who watched *BTL* had significantly higher mean scores for letter identification (i.e., scores were 1.5 times higher resulting in gains of 20% versus 13% for the control group) at the end of the viewing phase when compared to classmates who did not watch *BTL*.
- Phonemic awareness: Kindergarten children who watched *BTL* had significantly higher mean scores as well as significantly greater rates of growth on a phonemic awareness task (i.e., scores were 1.6 times higher resulting in gains of 64% versus 41% for the control group) at the end of the viewing phase when compared to classmates who did not watch *BTL*.
- Phonemic awareness: First grade children who watched *BTL* had significantly greater rates of growth on the phonemic awareness task (i.e., scores were 2.4 times higher resulting in gains of 33% versus 14% for the control group) when compared to classmates who did not watch *BTL*.
- Letter-sound correspondence: Kindergarten children who watched *BTL* had significantly higher mean scores and significantly greater rates of growth on a letter-sound correspondence task (i.e., scores were 2.6 times higher resulting in gains of 64% versus 25% for the control group) at the end of the viewing phase when compared to classmates who did not watch *BTL*. In addition, these kindergarten children who watched the program performed at first grade levels on the letter-sound correspondence task at the post-test (i.e., identifying 41 letter-sound correspondences versus 27 for the control group; 40 letter-sound correspondences is the level or benchmark that typically-developing children in the winter of first grade should achieve to be on track for later, fluent reading).

#### *Normative growth on a general test of reading achievement:*

- Kindergarten children who watched *BTL* had significantly higher raw scores on a general measure of reading ability than classmates who did not watch *BTL*. Gains for those who viewed averaged 26% from pre-test to post-test while gains for those who did not view averaged only 5%.

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<sup>1</sup> All outcomes were evaluated using an observed significance level (i.e., alpha) of .05. It is the probability that statistical results as extreme as the ones we observed would occur even if there were no differences between the viewing group and the control group (i.e., 5% of the time we would get this result when there is no true difference). If the observed significance level is small enough, usually less than 0.05 or 0.01, we generally conclude that the two groups are truly different (Maxwell & Delaney, 1990).

### Program and Character Appeal

- Ninety five percent of the children reported liking the show; 93% said they would watch it at home; 83% liked the print on screen; 75% reported learning new words while 31% could recall some of these words after a period of up to two weeks post-viewing.
- Cliff Hanger, Click, Gawain s Word, and Leona were the most liked characters while Busterfield was the least liked. Girls liked Dr. Ruth, Chicken Jane, Cleo and Leona more than boys. Boys liked Cliff Hanger more than girls.
- When asked what their favorite television show was, 17% of the children who viewed the show reported that *BTL* was their favorite. Of the remaining students, 70% reported liking *BTL* as much as their favorite show, 12% reported liking *BTL* more than their favorite show, and 18% reported liking *BTL* less than their favorite show. First grade boys (44%) were more likely to report liking the show less than their favorite show, while 93% of kindergarten girls and 96% of first grade girls reported liking *BTL* the same or more than their favorite show.
- Fifty six percent would change nothing about the show; 10% disliked the Vowelles; 5% disliked both Busterfield and Sam Spud
- Click was chosen most frequently to attend a birthday party and to talk to when sad. Boys most often chose Lionel to read them a story, while girls were more likely to pick Cleo.

### Parent and Teacher Reports

- Kindergarten children who watched *BTL* spent more time writing letters, notes, and stories (i.e., 3 to 4 times a week versus 1 to 2 times a week for the control group, a 10% gain from pre-test to post-test; the control group s frequency of writing declined by 6%) and made more frequent trips to the library and bookstore (i.e., about 2 — 3 days a month versus 1 day or less a month for the control group, a 19% gain from pre-test to post-test; the control group s frequency of trips declined by 4%) after the viewing phase ended when compared to kindergarten children who did not watch *BTL*.
- When asked to rate children s behavior in the classroom on a 3-point scale from never to often, teachers reported that first grade children who watched *BTL* spent more time writing during free time at school after the viewing phase when compared to first grade children who did not watch *BTL* (i.e., a mean of 2.6 for the viewing group versus a mean of 1.9 for the control group).

### **Conclusion**

The most prominent finding in this project was that kindergarten children who watched *Between the Lions* performed significantly better on almost all outcome measures of reading achievement when compared to kindergarten children who did not watch the program. More specifically, kindergarten children demonstrated significant growth on targeted skills featured in the program including concepts of print, phonemic awareness, and letter-sound correspondences. This growth was seen across each type of assessment: growth in the specific content featured in the different episodes; accelerated rates of growth in key emergent literacy skills; and normative growth on a generalized reading outcome.

Discovery of the alphabetic principle, or knowledge of letters, phonemic awareness, and letter-sound correspondence, is a necessary condition for full mastery of reading. Preliminary evidence suggests that *BTL* played a role in helping the kindergarteners in this project accelerate the acquisition of the alphabetic principle. Specifically, the kindergarten children who watched approximately half the first season of *BTL* were able to identify more letters and read more words than those kindergarteners

who did not watch. In addition, their understanding of concepts of print was enhanced (both for program specific content and more generalized content). Finally, their phonemic awareness and letter-sound correspondence abilities, two skills highly predictive of later, fluent reading, were significantly accelerated over those children who did not watch the program. And, in the case of letter-sound correspondences, kindergarteners who watched the program performed at first grade levels at the end of the project.

For first grade children, the results were mixed and less dramatic. Many of the patterns were there, and some significant results were obtained (i.e., rate of growth in phonemic awareness). Lack of additional findings may be due to a ceiling effect, that is, these children generally performed at or near the tops of our scales at the pre-test. Therefore, there was little room to measure improvement. Another plausible reason, shared by the first grade teachers participating in the study, was that these children already had the skills featured in the show (e.g., blending, segmenting, letter-sound correspondences, word recognition of sight words, c-v-c words). Finally, this data was collected during the last part of the school year, after nearly a full year of instruction in reading. Results may have been different if the data were collected in the fall of first grade.

Taken as a whole, these results are promising, suggesting that this program does lead to positive changes or growth in essential emergent literacy skills predictive of later, fluent reading. In addition, the majority of the children who watched the program liked it and wanted to watch it at home. Given that this program airs on public television, a universally available, free technology with enormous potential to reach all children, *Between the Lions* can help to reinforce, motivate and extend early literacy instruction, both in the classroom and within the child s home.

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## INTRODUCTION

One of the most compelling findings from recent reading research is that children who have an inadequate start in reading rarely catch up (National Research Council, 1998). Reading trajectories are established early and are difficult to change (Fleming & Good, in press; Kaminski & Good, 1996). Johnson and Allington (1991) comment that remedial reading is generally not very effective in making children more literate. The unavoidable conclusion, then, is that the most sensible way to improve remedial reading is to eliminate the need for it in the first place (p. 1001). For some children, there are often multiple risk factors that contribute to reading difficulties, including lack of appropriate home literacy experiences (i.e., opportunities for verbal interactions, story telling, and early book reading; National Research Council, 1998). Although families want the best for their children, they may be unaware or unable to afford a range of educational materials (e.g., books, cultural trips, high-quality child care) for their children. Educational television provides these families with a free and universal service that has been shown to significantly contribute to children s educational and social needs (e.g., Huston & Wright, 1997). This report represents the summative evaluation of a new series for young children called *Between the Lions (BTL)*. Specifically, *Between the Lions* gives young children easy access to a print-rich environment and demonstrates the key skills associated with emergent literacy.

What is emergent literacy? Whitehurst and Lonigan (1998) report that emergent literacy consists of the skills, knowledge, and attitudes that are presumed to be developmental precursors to conventional forms of reading and writing and the environments that support these developments (p. 849). *BTL* presents young children with an environment, or set of experiences, that may affect the development of emergent literacy. This environment is comprised of visual and auditory stimuli (e.g., print on screen with changing initial and final consonants while a voice speaks the letter sounds and words being formed) that have been carefully designed to specifically teach concepts of print, phonemic awareness, and letter-sound correspondences. Other skills may be taught incidentally (e.g.,

letter identification) and other goals have been articulated for this program (e.g., whole language elements; L. Rath, personal communication, December 1999). This evaluation primarily focused on these three targeted components of emergent literacy.

Concepts of print refer to the conventions associated with reading and writing in English. Children need to develop a sense of how to orient a book, turn the pages, discriminate between print and pictures, and read from left to right and top to bottom. Understanding concepts of print is important for later reading comprehension and decoding (Whitehurst & Lonigan, 1998).

Phonemic awareness is an awareness that words are made up of sounds. Sensitivity to the sounds in words is critical to discovering the alphabetic principle, or the idea that letters generally represent the small speech sounds called phonemes. Children who are better at detecting syllables, rhymes, or phonemes are quicker to learn to read and are better spellers (Whitehurst & Lonigan, 1998).

Letter-sound correspondences, or the ability to phonologically recode, refers to the links children must make between the sounds (i.e., phonemes) and the alphabet letters. Children need to be able to translate letters and letter patterns into phonological forms. Therefore, the ability to phonologically recode requires knowledge of both the sounds of individual letters and combinations of letters. Children who have better phonological recoding ability are more likely to achieve higher levels of reading achievement (Iverson & Tunmer, 1993; Whitehurst & Lonigan, 1998).

## PURPOSE

On January 7, 2000, WGBH Educational Foundation entered into a service agreement with Juniper Gardens Children's Project at the University of Kansas for the dual purposes of determining the program's ability to effectively help children acquire key early literacy skills associated with emergent literacy (i.e., concepts of print, phonemic awareness, letter-sound correspondences) as well as the appeal of a new program called *Between the Lions* for kindergarten and first grade children. Specifically, did the program produce positive changes in the acquisition of these literacy skills and did children like the program? To answer this question, we employed an experimental research strategy where children were assigned to one of two groups: children who watched *BTL* (viewing group) and children who did not watch *BTL* (control group). This approach allowed us to answer basic questions about the program's ability to produce growth in early literacy skills over time. In addition, this evaluation was conducted prior to the airdate of the program, ensuring that there were no contaminating effects of incidental viewing outside of the experimental manipulations. Specific program objectives evaluated included:

**Objective 1: Evaluation of the acquisition of early literacy skills.**

**Objective 2: Evaluation of character and program appeal.**

## METHOD

### The Sample

The 164 children and families participating in this study were drawn from schools located in three cities in the greater Kansas City area: Bonner Springs and Kansas City, Kansas, and Liberty, Missouri. Consent forms were sent home to parents in the kindergarten and first grade classrooms in

these schools. Children with parental consent participated in the assessments and viewing sessions at their schools. Trained graduate students and research faculty of the Juniper Gardens Children's Project, University of Kansas, conducted all assessments.

Table 1 describes the participants. There were nearly equal numbers of boys (51%) and girls (49%). About 81% were European American; 6% were African American; 7% were Hispanic; 5% represented Native Americans and other ethnic groups. Almost 7% spoke Spanish regularly in the home.

Both mothers and fathers had on the average 13 years of education, equaling about high school plus 1 year of additional training. Despite efforts to equalize the viewing and control groups, we did find significant differences between the two groups for children in kindergarten: the control group's parents reported higher levels of education than the viewing group's parents<sup>2</sup>.

About 36% of the families reported incomes below \$30,000; 28% reported incomes between \$30,000 and \$45,000; and 36% reported incomes above \$45,000.

**Table 1. Characteristics of the Sample**

Attribute	Description	Kindergarten			First Grade		
		All	C	V	All	C	V
Total	Entire Sample	79	37	42	85	41	44
Gender	Boys	41	20	21	41	23	18
	Girls	39	17	21	44	18	26
Ethnic Group	African-American	6	4	2	4	3	1
	European-American	64	32	32	69	32	37
	Hispanic-American	5	1	4	7	1	6
	Native American	1	0	1	0	0	0
	Other	3	0	3	5	4	1
Disability Status	Children with Disabilities	7	1	6	6	3	3
	Children w/out Disabilities	72	36	36	79	38	41
Primary Language	English	72	34	38	80	39	41
	Spanish	6	2	4	3	1	2
	English & Spanish	0	0	0	2	0	2
	Other	1	1	0	0	0	0
Demography	Mom-Years of Education	13.9	14.7	13.2	13.0	13.2	12.9
	Dad-Years of Education	13.7	14.2	13.4	12.3	12.4	12.2
	Income						
	\$0 - \$29,999	20	11	9	36	19	17
	\$30,000 - \$44,999	22	9	13	17	5	12
\$45,000 and above	33	16	17	28	14	14	
Did not report	4	1	3	4	2	2	

<sup>2</sup>  $t(77) = 2.40, p < .019$

Note. C = control group; V = viewing group.

### Design of the Study

An experimental/control group design was used. Children were recruited from kindergarten and first grade rooms. Assignment to control or experimental groups was completed using stratified sampling by classroom and grade. Given classroom structure, random assignment by individual was not possible.

The experimental group viewed 17 ½-hour episodes of *BTL* (see Appendix C for a list of all episodes and viewing order), one each day the children were in school from the end of February to the beginning of April (i.e., there were days off for spring breaks and other district-scheduled vacation days during this time). Children assigned to the viewing group watched the program in their classrooms at the same time each day, generally in the afternoon. Children in the control group maintained their usual schedule during the viewing phase. Teachers were instructed not to discuss any elements of the program prior to, during, or after viewing the episodes.

### Measures

Four basic types of data were used to generate the present report: (1) family demographics, home literacy environment, and frequency of print activities; (2) teacher reports; (3) child reports; and (4) learning outcome measures. Appendix B contains copies of all researcher-developed measures.

First, family demographics (e.g., birth date, education, child's ethnicity/race, child's disability status, income) were assessed using a questionnaire that was sent home from school with the child. Home environment was also measured by questionnaire and included items about access to print in the home and frequency of participation in different media activities in the home. These questions were researcher-developed using items from previous research (Wright & Huston, 1995).

Teachers were asked to report on the child's initial reading ability. In addition, teachers reported on the frequency of reading and writing behaviors observed in the classroom. These items were researcher-developed from previous research (Linebarger, 1998; Wright & Huston, 1995).

The third type of data included child reports regarding the appeal of the show and of particular characters. These items were researcher-developed in consultation with *BTL* staff.

The fourth type of data included the outcome measures, comprising tasks specific to program content, measures of particular reading skills, and a standard achievement test of early reading abilities. The program specific measures were developed in conjunction with the *BTL* curriculum director, Dr. Linda Rath. The measures of particular reading skills are standardized and widely used in both applied and research settings (Kaminski & Good, 1996) while the standard achievement test is commercially published (Reid, Hresko, & Hammill, 1989).

### Family Demographics and Home Environment

The demographic information reported above was collected from the parent respondent with whom the child lived. Of particular interest was the education of the parent(s), defined as the average

number of years of education for the parent with whom the child lived and that parent's spouse or partner. Parent education served as an index of the educational level of the home and family. In addition, there is evidence from other studies of educational television viewing that it is associated with viewing patterns, and that it is likely to predict such outcomes as reading achievement (Huston & Wright, 1997; Wright & Huston, 1995). Income level was ascertained and then recoded into three levels: families with incomes below \$30,000, families with incomes between \$30,000 and \$44,999, and families with incomes of \$45,000 and above.

The home environment was assessed through a number of items including type of print resources available, frequency of print use, and amount of television viewed. Parents were asked whether they received a newspaper or magazines regularly, if there were more than 25 books in the home and how many books the target child had, if there was a dictionary or computer in the home, and if they had access to cable television.

Frequency of the child's participation in media activities in the home was measured on a 7-point scale ranging from never to several times per day. The different print activities included how often the child looked at books alone; was read to by someone in the home; asked to be read to by someone; wrote letters, stories, or notes; went to the library or bookstore outside of school; read or looked at magazines; used videogames; used computers; and how often the parent suggested that the child read or look at a book. Finally, parents were asked to report how much television the child watched on the average weekday and the average weekend day.

Parents were also asked to describe their child's initial reading ability: how many letters and sounds did the child know (i.e., knows all, knows some or most, knows a few), what level was their child reading (i.e., reads books, simple sentences, some words, is not yet reading), and could the child read on his/her own (i.e., yes or no).

### Teacher Reports

Teachers were asked to complete brief questionnaires prior to the viewing and after it ended. The initial questionnaire contained items regarding the child's reading level (i.e., below, at or above grade level) and the frequency that the child engaged in the following behaviors at school: reading or looking at books during free time, writing during free time, talking with others about books, using the computer during free time, and talking about TV characters or shows (i.e., never, sometimes, often, not applicable, or don't know). The final questionnaire contained items about the frequency that the child engaged in the behaviors described above as well as a question for those children in the viewing group regarding how engaged the child was while watching the videos (i.e., not at all, somewhat, a lot). Teachers were also asked to describe anything interesting about the child's viewing experience.

Teachers were given a questionnaire that solicited information about their perceptions of the show: how useful was it for reading and writing, how likely would they be to use it in the classroom, what were their children's favorite parts, any changes they would make, and what kinds of supplementary materials they would use.

### Children's Interviews

For the children in the viewing group, a questionnaire was developed that asked children to rate their feelings about the program. Fifteen recurring characters were chosen and picture booklets of these characters were assembled. Using the pictures as a prompt, children were asked if they knew the

character's name, how much they liked the character on a 5-point rating scale from not at all to a lot, and why they liked/disliked the character. Children were also asked more general questions about the program: who they would invite to a birthday party, who they would want to talk to if they were sad, and who they would want to read them a story. Other items included how much they liked the print on screen, if they learned new words (and what some of those words were), how much they liked the show in general, whether they would watch the program at home, if there were parts that they would change, and how *BTL* compared to their favorite show.

### Learning Outcomes

A three-tiered approach to gauge the impact of this show on the acquisition of early literacy skills was used. First, were children able to learn the actual content demonstrated on the show? We answered this question by examining performance across five important curricular goals: letter-sound correspondences; word recognition of high frequency sight words, simple consonant-vowel-consonant words, and decodable long words; exploration of the meaning of new words; understanding word families; and concepts about print. Second, did this specific content help to accelerate the acquisition of specific early literacy skills? We answered this question by repeatedly assessing performance on three discrete skills: knowledge of letters; awareness of within-word sounds; and ability to manipulate and blend sounds into words (Dynamic Indicators of Basic Early Literacy Skills; Kaminski & Good, 1996). Finally, we wanted to know whether we could produce changes on a standardized measure of early literacy behaviors directly tied to later reading performance. To evaluate whether the program was successful, we administered a commonly used standardized test which measures a child's ability to attribute meaning to printed symbols, his/her knowledge of the alphabet and its functions, and his/her understanding of the conventions of print (Test of Early Reading Ability-2; Hreid, Hresko, & Hammill, 1989).

Taken together, this three-tiered approach provided us with information about the degree of impact (from specific content to general reading ability) and about how different groups of children (kindergarten versus first grade; initial reading ability) benefited from watching this show.

Specific program content was measured through five different subtests corresponding to the five curricular goals outlined above: speech to print matching, word recognition, word building, word meaning, and concepts of print. These subtests were administered prior to and following the viewing.

1. *Speech to Print Matching*: This subtest measured children's phonemic awareness and their ability to discriminate initial consonants, final consonants, vowels, and blends. Children were shown cards with 3 words printed on them and asked to point to a word that the examiner said.
2. *Word recognition*: This subtest measured the child's ability to accurately recognize and read aloud different types of words. Children were asked to read from four lists containing 73 different words found in the 17 programs. These words ranged from common sight words (e.g., the, of, in, and, is, you, that), to consonant-vowel-consonant words (e.g., pop, ram, hug, cap, ten), to long words (e.g., butterfly, helicopter, unzipped, restaurant), and other difficult words (e.g., antlers, chapter, criminal).
3. *Word building*: This subtest measured the child's ability to identify and use the word family strategy. Children were given small squares with a letter or two letters printed on them and were asked to identify sounds and put the parts together to form words.

The sounds included /s/, /ch/, /u/, /i/, /o/. Words included hop, chop, sun, bun, sits, chops, hits, bunch, and hitch.

4. *Word meaning*: This subtest measured the child's knowledge of the meanings of new words, an important factor in reading comprehension and subsequent academic success. Children were asked to tell the examiner what they thought a particular word meant. All words were taken from program episodes. Words included hen, jig, ox, yam, ram, cub, antlers, clam, humongous, and survival manual.
5. *Concepts of print*: Concepts of print refers to children's general understanding of how print can be used (versus knowledge about specific letters). This measure was adapted from Clay's Concepts of Print (1972) using a stimulus material taken from the *BTL* program. A screen shot of the opening and the first four lines of the recurring segment featuring Chicken Jane, Scot, and Dot (using the same font) was shown to the child accompanied by a series of questions including where to begin reading, where to end, word-by-word pointing, identifying two words that were the same, identifying specific words, finding words that rhyme, finding words that begin with /s/ or end with /k/, pointing to an exclamation point and describing what an exclamation point means, and reading the 18 words from the introduction.

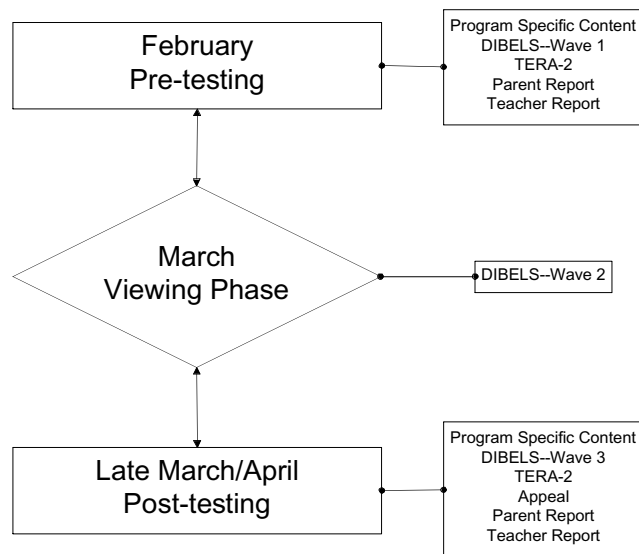
Individual reading skills were measured using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment tool (Kaminski & Good, 1996). DIBELS is comprised of 3 individually administered and timed subtests: letter naming, phonemic segmentation fluency, and nonsense word fluency. DIBELS' unique contribution to the project was to track acceleration in rates of growth associated with particular early literacy skills attributable to watching *BTL*. Children were given a set of instructions, a practice item, and then asked to do as many of the particular subtest as they could for one minute. Each subtest had 20 equivalent forms available. These tasks were administered three times: prior to the viewing, after viewing 8 episodes, and after the viewing ended.

1. *Letter Naming*: This subtest measures a child's ability to rapidly name both upper and lowercase letters and has been found to be a very strong predictor of future reading (National Research Council, 1998). Children were given a sheet of paper with upper and lower case letters printed in rows across the page and were asked to name as many as they could in one minute.
2. *Phonemic Segmentation Fluency (PSF)*: This subtest is a measure of phonemic awareness, or an awareness of and ability to manipulate the phonological components in words. This awareness is vital to the acquisition of reading in that a person must be aware of the individual phonological units that make up spoken words to learn the letter-sound correspondences that make up printed words. Without phonemic awareness, the patterns of letter-sound correspondences will seem strange and arbitrary. This subtest is a strong predictor of the speed with which children will acquire reading skills. Ability to attain between 35 to 45 segments per minute by spring of kindergarten or fall of first grade has been set as the benchmark indicating where reading instruction will be maximally effective (Good & Kaminski, 2000). Children were given a word and then asked to name all the sounds in that word. Credit was based on the number of sounds children were able to name. For example, examiner says sled, child says /s/ /l/ /e/ /d/ and would receive two points, or /s/ /l/ /e/ /d/ and receive 4 points.

3. *Nonsense Word Fluency (NWF)*: NWF consists of words that are not real words, but that follow the rules of English syllable structures (i.e., phonotactics) and orthography. In every language there are restrictions about the patterning of phonemes (or sound combinations) in words. This subtest measures the child's knowledge of English syllable structures, or the alphabetic principle. In order to complete the task, children need to (1) understand that letters correspond to sounds which, in turn, are blended together to form words and (2) blend them together in a confident manner to obtain a high score on the measure. Achieving 40 letter-sound correspondences by winter of first grade has been set as the benchmark for prediction of successful later reading achievement (Good & Kaminski, 2000). Children were given a sheet of paper with nonsense words printed on them across the page and were instructed to read or say as many of the sounds as they could in one minute. The examiner gave credit for any correctly said sounds. For example, a child would see *rij* and say /r/ /i/ /j/ and receive 3 points or say /r/ and receive 1 point.

Early reading abilities were measured using the Test of Early Reading Ability-2 (TERA-2), an individually administered, standardized test (Reid, Hresko, & Hammill, 1989). This test measured the child's ability to construct meaning from print, the child's knowledge of the alphabet and its functions, and the child's knowledge of print conventions and was included to examine normative growth in early reading ability. Items included reading upper and lower case letters, identifying errors in sentence structure or punctuation, reading left to right, etc. Its authors report adequate psychometric properties. Coefficient alphas ranged from .89 to .94 (i.e., the criterion for acceptable reliability is .80). Test-retest using alternate forms (i.e., a measure of the test's stability over time) was .89, again, well above the criterion of .80. Validity estimates were calculated by correlating the TERA-2 with another standardized measure, the Basic School Skills Inventory-Diagnostic (BSSI-D), Reading subtest. Significant correlations were obtained ranging from .52 to .61,  $p < .05$ .

Procedure. After consent was received, children were pre-tested using the researcher-developed and standardized instruments described above. Once all pre-testing was completed, children in the viewing classrooms watched 17 -hour episodes during the next 3 \_ to 4 weeks. Teachers were instructed not to discuss the videotapes during or after viewing. After the viewing group finished viewing 8 episodes, children in both groups were tested using the DIBELS measures. Once all episodes were viewed, both groups of children were again tested with the same set of measures administered during the pre-test.



**Figure 1. Measurement and Viewing Timeline**

### Analytical Approach

Simple descriptive statistics (i.e., mean, standard deviation, percentages), cross-tabs, t-tests, and chi-squares were used to describe and test for differences in child and family characteristics, the home

environment, and program appeal. Because assignment to control and viewing groups was based on a stratified sampling strategy and in order to be sure that effects of the viewing were the ones being reflected in the outcome measures, controls for what the child already knew or did prior to the viewing were necessary. It was important to know that the benefits or deficits observed from viewing *BTL* were not confounded with differences that were present at the start of the study. Therefore, to start the children on a level playing field, it was necessary to control for their pre-test scores on all outcome measures. Next, it was important to separate the cumulative contributions of family characteristics from those associated with the viewing. To that end, an additional control, parent's level of attained education, was included as an index of the family contribution to the child's outcome scores. Finally, given the different types of emphasis on reading instruction found in kindergarten and first grade, it was decided that all analyses would be completed separately by grade. We did evaluate all outcomes for gender differences and found none; therefore, gender was dropped from further analysis.

Analysis of Covariance (ANCOVA) is a procedure that can be used to statistically control for initial group differences (as measured by the pre-test and parent's education) when evaluating control/viewing effects on outcome measures. Grouping factors in the ANCOVA included viewing (yes, no) and initial reading ability (below, at, or above grade level). This procedure was used for several different measures: parent-reported frequency of print activities in the home; teacher-reported behaviors in the classroom; and child outcome measures where only pre- and post-test scores were taken. When multiple tests were conducted for each set of outcomes, Bonferroni adjustments of the alpha level were made to reduce Type 1 error rates (i.e., finding a significant difference when one does not exist).

To examine outcomes associated with individual reading skills as measured by the DIBELS, Hierarchical Linear Modeling (HLM: Bryk & Raudenbusch, 1992; Bryk, Raudenbush, & Congdon, 1996) was used. The best way to examine the children's acquisition of early literacy skills and the effectiveness of watching *BTL* is by a trajectory of growth. Growth trajectories summarize information on rate of change on these essential early literacy skills. In addition, it is possible to calculate children's performance at one point in time. By doing this, we are able to evaluate any significant group differences related to watching *BTL*. These parameters, rate of change and mean performance level, provide us with different information: rate of change tells us how children are changing, or growing, over time while mean performance level tells us where their skills are at a particular point in time. Predictions of future performance require both pieces of information; that is, where children's skills are and an estimate of how these skills are changing.

HLM - level 2 analyses were used to model growth as a function of viewing (yes, no) and initial reading skill (below, at, or above grade level). Parent's education was also included as a control variable. A unique advantage of HLM analysis, termed centering, is the ability to compute a group mean or test for mean differences between groups at a single point in time (Bryk & Raudenbusch, 1992). While centering at a point in time produces a unique value for the mean intercept, the value of the linear slope is unaffected by centering. Unless otherwise indicated, the intercept means in this study were centered at the post-test in order to evaluate any group differences at the end of the viewing.

## RESULTS

### Home Literacy Environment

All analyses below related to the home literacy environment were checked for control/ viewing differences within each grade at the pre-test. Because no significant differences emerged, we examined differences by grade (aggregated across control/viewing groups). When significant, results by grade are presented; otherwise, results were pooled across all participants.

### Access to Print Materials in the Home

The majority of parents reported having regular subscriptions to magazines (57%), a dictionary (92%) and a computer (65%), more than 25 books in the home (95%), and cable television (75%). Differences between kindergarten and first grade families were observed in the number of households who received newspapers regularly (58% kindergarten; 34% first grade<sup>3</sup>).

### Parent Assessment of Child s Reading Skills

As would be expected, differences in parents reports of their children s reading abilities were observed between kindergarten and first grade families. First grade children knew more letters of the alphabet<sup>4</sup>, were able to read more words and sentences<sup>5</sup>, and were more often reading books on their own<sup>6</sup>. Both kindergarten and first grade children liked reading or looking at books on their own a lot (76%) and having someone read to them a lot (83%).

### Children s Television Use

Interestingly, differences were found between boys and girls in the number of hours spent per day watching television. Contrary to previous research (Huston & Wright, 1997), girls watched more television than boys on average ( $M_{boys} = 1.98$  hours;  $M_{girls} = 2.61$  hours)<sup>7</sup>. See Figure 1.

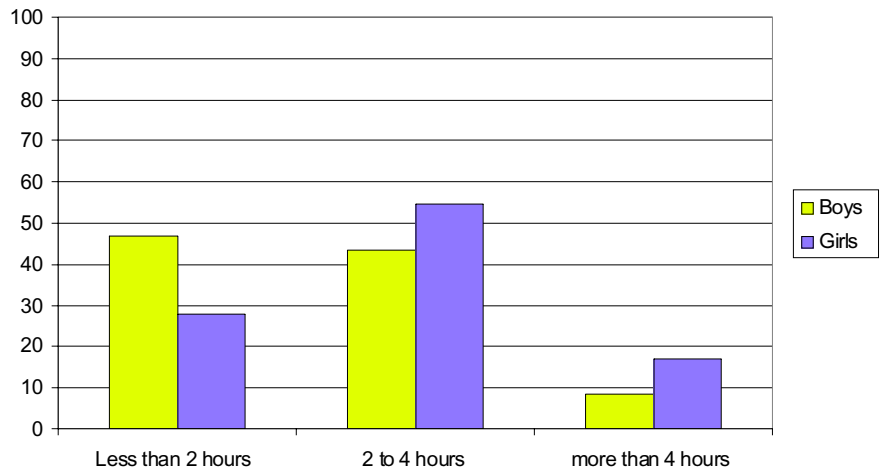


Figure 1. Percentage of Children Who Watch TV

<sup>3</sup>  $\chi^2(1, N = 164) = 9.59, p < .002$

<sup>4</sup>  $\chi^2(1, N = 164) = 9.07, p < .011$

<sup>5</sup>  $\chi^2(1, N = 164) = 44.31, p < .000$

<sup>6</sup>  $\chi^2(1, N = 164) = 17.92, p < .000$

<sup>7</sup>  $t(162) = 7.02, p < .000$

## Learning Outcomes

### Specific Program Content

See Figures 2 (kindergarten) and 3 (first grade) for average percent gains from pre-test to post-test on all specific program measures. Means, standard deviations, adjusted means, and ANCOVAs are reported in Appendix A.

- Speech to print matching

Kindergarten children in the viewing group were able to match just over one word more than those kindergarteners in the control group, a significant difference<sup>8</sup>. Seven percent of the variance in speech to print matching was associated with watching *BTL*.

First grade children in both groups had nearly perfect scores at the pre-test, indicating that there was little room to grow and that this subtest was easy.

- Word recognition

Kindergarten children in the viewing group knew, on average, almost 7 words more than the kindergarten control group at the end of the study.<sup>9</sup> Watching *BTL* accounted for 17% of the variance in children's ability to read words accurately.

There were no significant differences for first grade viewing and control groups on word recognition scores

- Word meanings

Kindergarten viewing and control groups did not differ significantly on their knowledge of word meanings at the post-test.

The only differences noted for first graders were related to the child's initial reading ability. As expected, those reading above grade level scored higher than those reading at grade level, who, in turn, scored higher than those reading below grade level<sup>10</sup>. Initial reading ability accounted for 12% of the total variance in word meanings.

- Word building

There was a trend, although not significant, toward kindergarteners in the viewing group scoring higher than those in the control group.

No differences emerged on the word building task for first graders, most likely due to first graders' ability to successfully complete this task prior to the viewing.

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<sup>8</sup>  $F(1, 70) = 5.62, p < .021$

<sup>9</sup>  $F(1, 70) = 13.98, p < .000$

<sup>10</sup>  $F(2, 74) = 4.81, p < .011$

- Concepts of print

For kindergarten children, there was a significant mean difference on this post-test measure: the experimental group scored over 5 points higher, on average, when compared with the control group<sup>11</sup>. Watching *BTL* accounted for 17% of the total variance associated with concepts of print.

The post-test mean difference for first-grade children, although in the hypothesized direction, was not statistically significant.

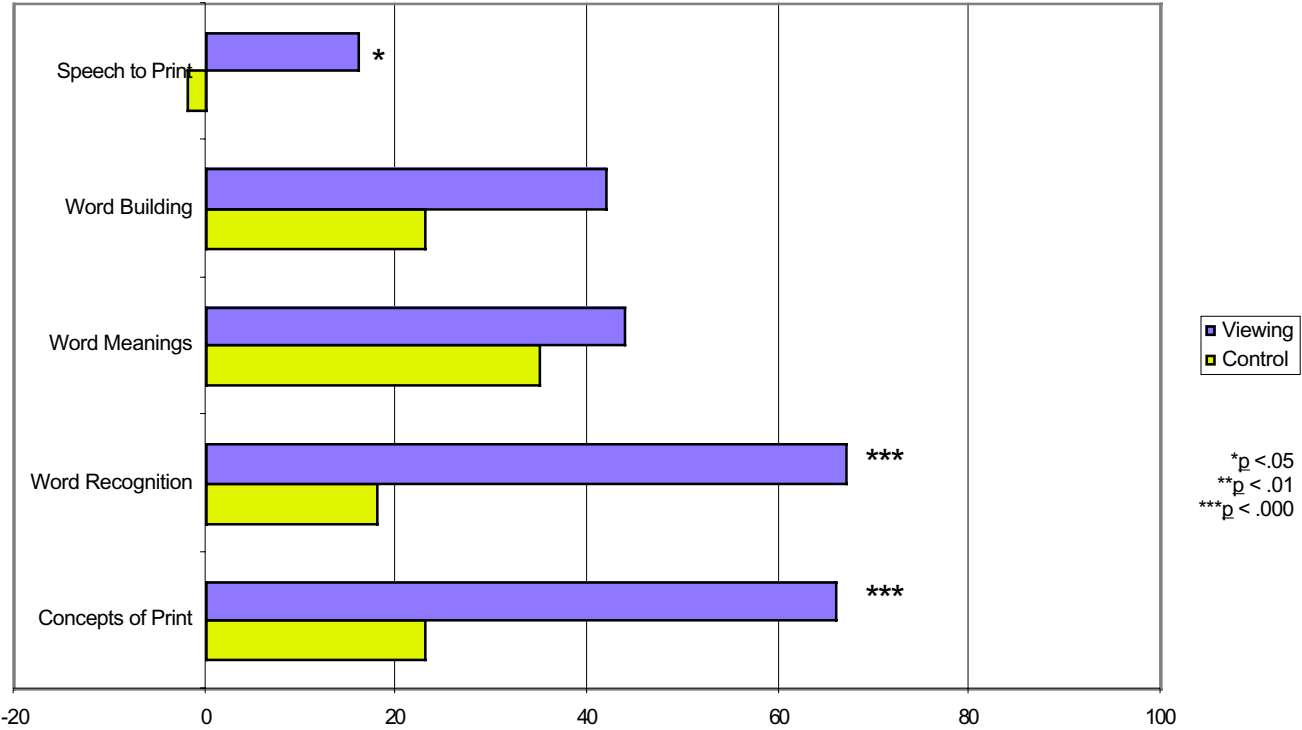
**Program Specific Measure Conclusion.** Kindergarten children who watched *BTL* scored higher on all measures of specific curricular content. Statistically significant results appeared for word recognition, speech to print matching, and concepts of print. These findings provide evidence for the assertion that children still learning to read can benefit from the types of information presented in this television series. In addition, these results are especially dramatic given that children viewed up to 17 episodes over a 3 - to 4-week period.

For first grade children, the direction of effects, for the most part, was present (i.e., children in the viewing group scored higher than children in the control group); however, none of these results achieved significance. This finding is probably due to a ceiling effect, or most of the children knew, could read, or could define the words and concepts presented in these subtests at the outset, leaving little room for measurable improvement. In addition, the data were collected in the early spring after almost a full year of instruction, supporting the notion that first graders most likely knew most of the specific program content featured in the program and measured in the tests.

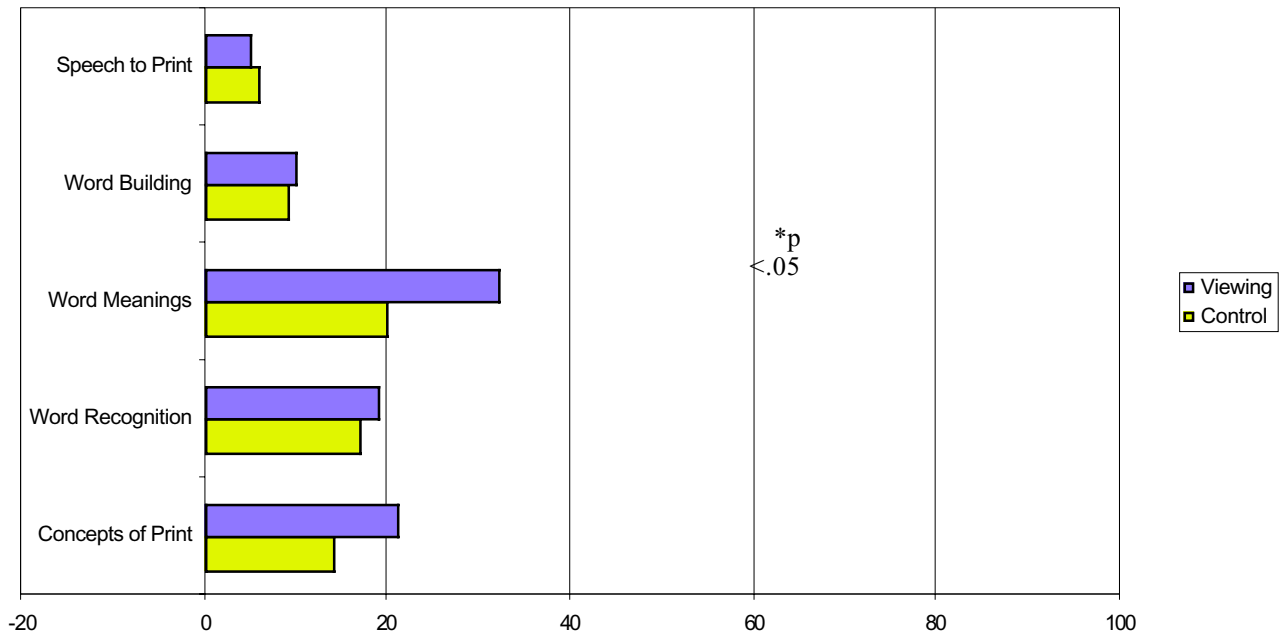
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<sup>11</sup>  $F(1, 70) = 13.85, p < .000$

**Figure 2. Average Percent Gain from Pre-test to Post-test for Specific Program Content--Kindergarten**



**Figure 3. Average Percent Gain from Pre-test to Post-test for Specific Program Content--First Grade**



Individual Reading Skills (DIBELS)

- Letter Naming

For kindergarten children, significant differences on mean level of performance were found at the end of the viewing in favor of children who watched *BTL*. No differences were found in the children s rate of growth. See Figure 4.

For first graders, no significant differences were noted for rate of change or mean performance level on the letter naming task. See Figure 5.

- Phonemic Segmentation Fluency

Kindergarten children in the viewing group had both significantly higher rates of growth and significantly higher mean levels of performance at the end of viewing when compared to children who did not watch *BTL*. On average, these children were able to segment 8 additional parts and were growing at a rate of almost nine segments per 8 episodes viewed (compared to 5.5 segments for children who did not watch the show). See Figure 6.

First grade children did not differ on mean performance level at the end of viewing; however, their rates of growth were significantly higher than those children in the control group. In addition, the first graders in the viewing group started out segmenting fewer words prior to viewing and finished

able to segment more words. Although this difference was not significant, it is an encouraging trend. See Figure 7.

- *Nonsense Word Fluency*

For this skill, kindergarten children in the viewing group had a higher mean level of performance at the end of viewing and greater rates of growth when compared to children in the control group. These children scored 14 points higher than those in the control group and were growing at a rate of over 8 letter-sound correspondences per 8 episodes viewed (compared to just over 2 sounds for children in the control group). See Figure 8.

There were no significant differences for first graders on the nonsense word fluency task. See Figure 9.

**Individual Reading Skills (i.e., DIBELS) Conclusion.** Kindergarten children who watched the *BTL* program showed greater mean levels of performance for letter naming and nonsense word fluency and accelerated rates of growth for phonemic segmentation fluency and nonsense word fluency after viewing just 17 episodes of *BTL*. The letter naming results are most likely attributable to the child's increased facility at using and understanding letters, given the program does not directly teach letter names as part of its curriculum goals.

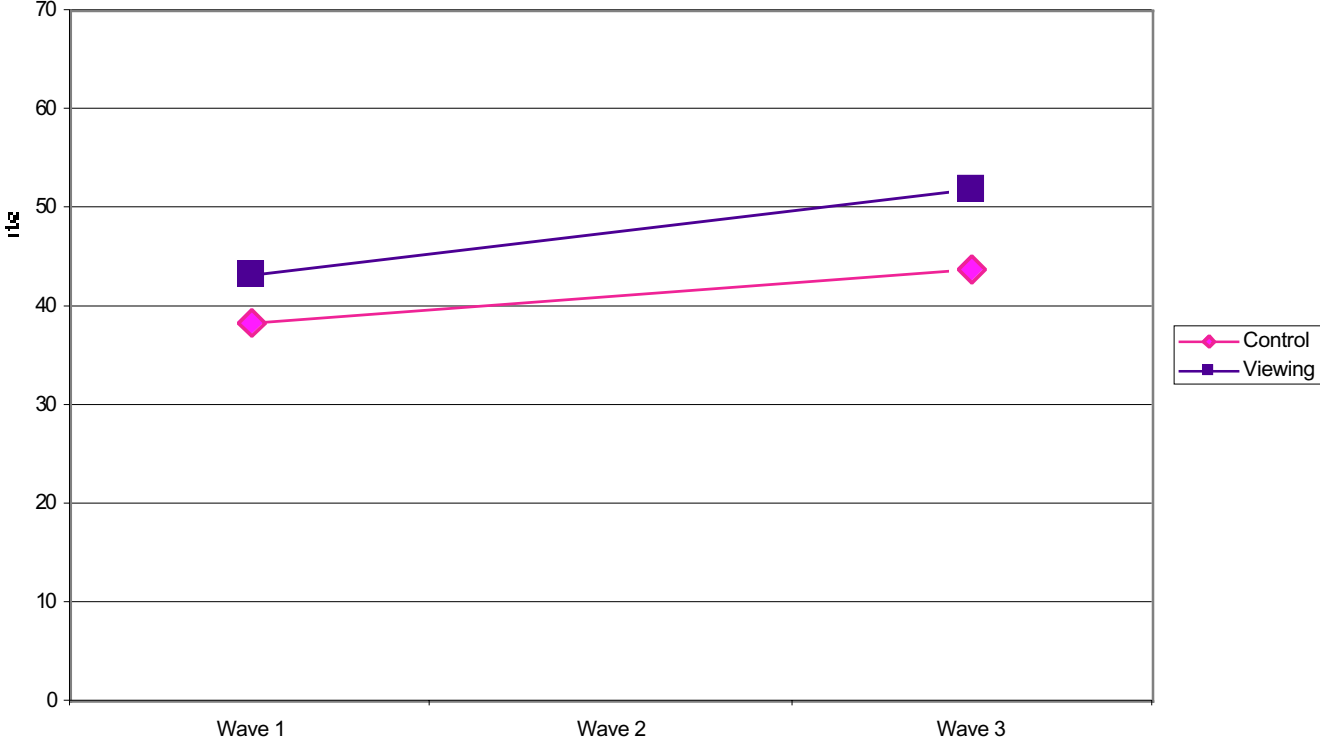
Phonemic segmentation fluency measured children's phonemic awareness, or knowledge of the sound structures that comprise words. Greater phonemic awareness translates to increased facility in decoding and subsequent fluent word recognition. Nonsense word fluency measured children's ability to use the alphabetic principle effectively, or to translate letters and letter combinations into phonological forms. Children who are not able to do this task effectively tend not to become skilled readers, as performance on this measure differentiates good readers from poor readers (Gough & Tunmer, 1986; Iverson & Tunmer, 1993). Kindergarten children who watched *BTL* had significantly greater rates of growth and higher mean performance levels when compared to kindergarten children who did not watch the program at the end of the viewing phase. Phonemic awareness and letter-sound knowledge act in combination to promote the acquisition of reading skill (Bryne & Fielding-Barnsley, 1989).

For developers of an educational program designed to teach early literacy skills, demonstrating measurable improvement in these skills is vitally important to the success of the show. Therefore, these results are noteworthy and encouraging. This program was able to accelerate the acquisition of two critically important predictors of later reading for kindergarten children: phonemic awareness (i.e., PSF task) and letter-sound correspondence (i.e., NWF). In addition, average performance on NWF indicates that the kindergarten children who watched *BTL* accelerated their skills to a level indicative of successful reading achievement for typically developing children in the winter of their first grade year. Finally, when inspecting kindergarteners' performance on all three tasks at the post-test, kindergarteners who viewed the program performed at roughly the same levels as first grade children prior to any viewing.

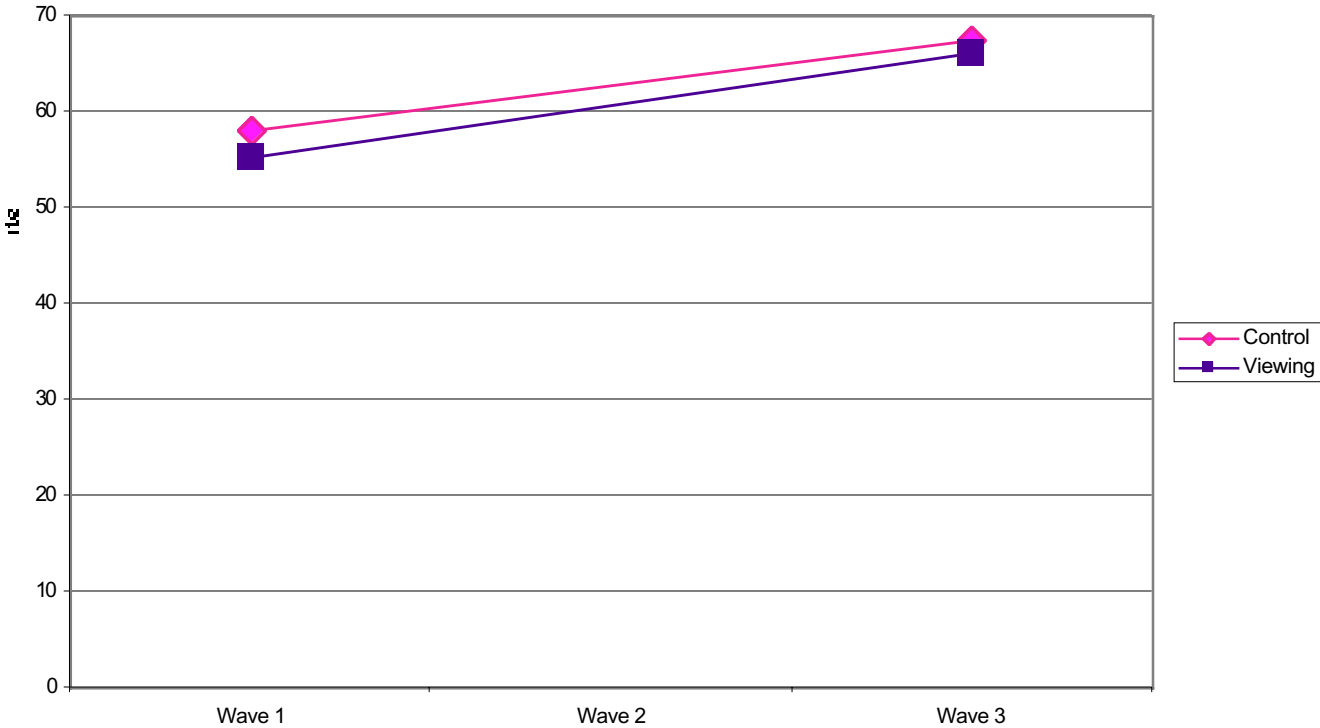
For first graders, those who watched *BTL* had higher rates of growth in segmenting when compared to those who did not watch the programs. No other differences were noted. This study took place in late March and April, nearing the end of almost a school year of reading instruction targeted at blending, segmenting, and basic reading. Most of the first grade children in the study were able to adequately perform the necessary skills associated with the DIBELS tasks. It is impressive that

segmenting was accelerated, given that the mean performance at the start was already above the benchmark indicating readiness to read (i.e., benchmark = 35 segments per minute; pre-test segmenting average = 45 segments per minute). Other research indicates that the more effective children are at this phonemic awareness task, the better their subsequent mastery of reading will be (Whitehurst & Lonigan, 1998).

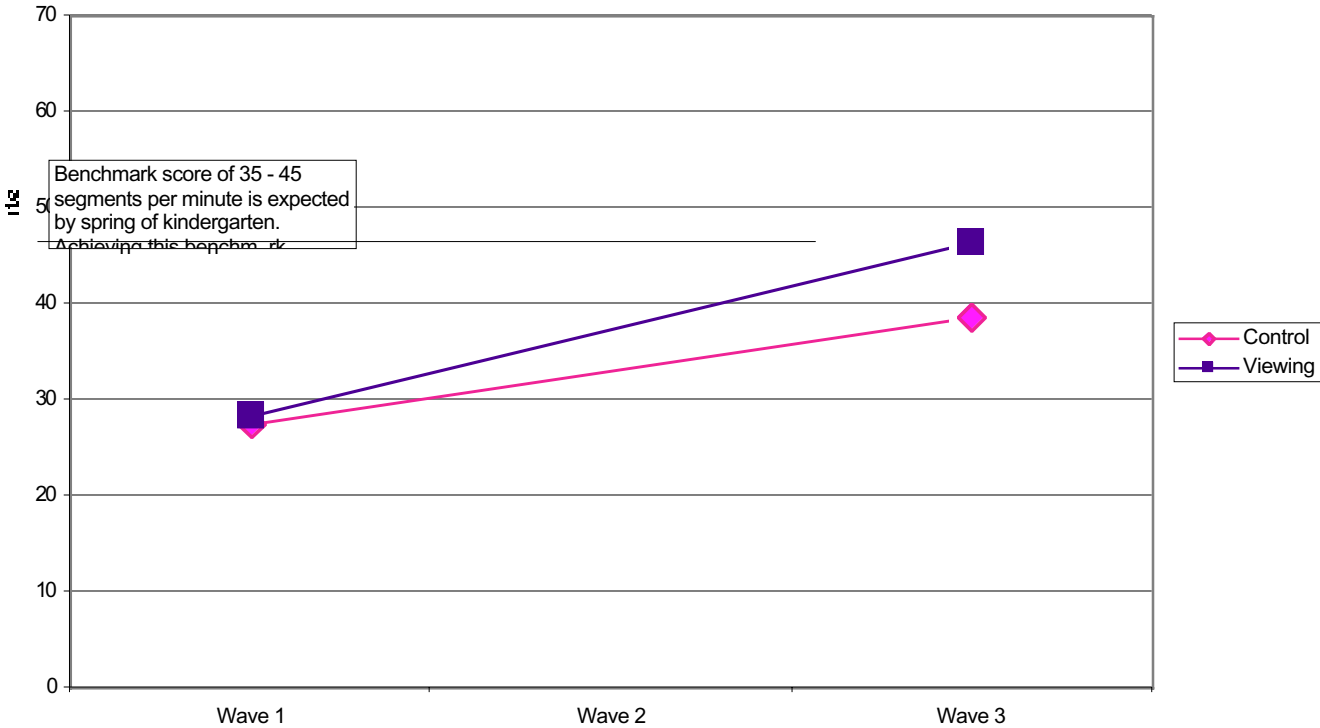
**Figure 4. Growth in Letter Naming--Kindergarten**



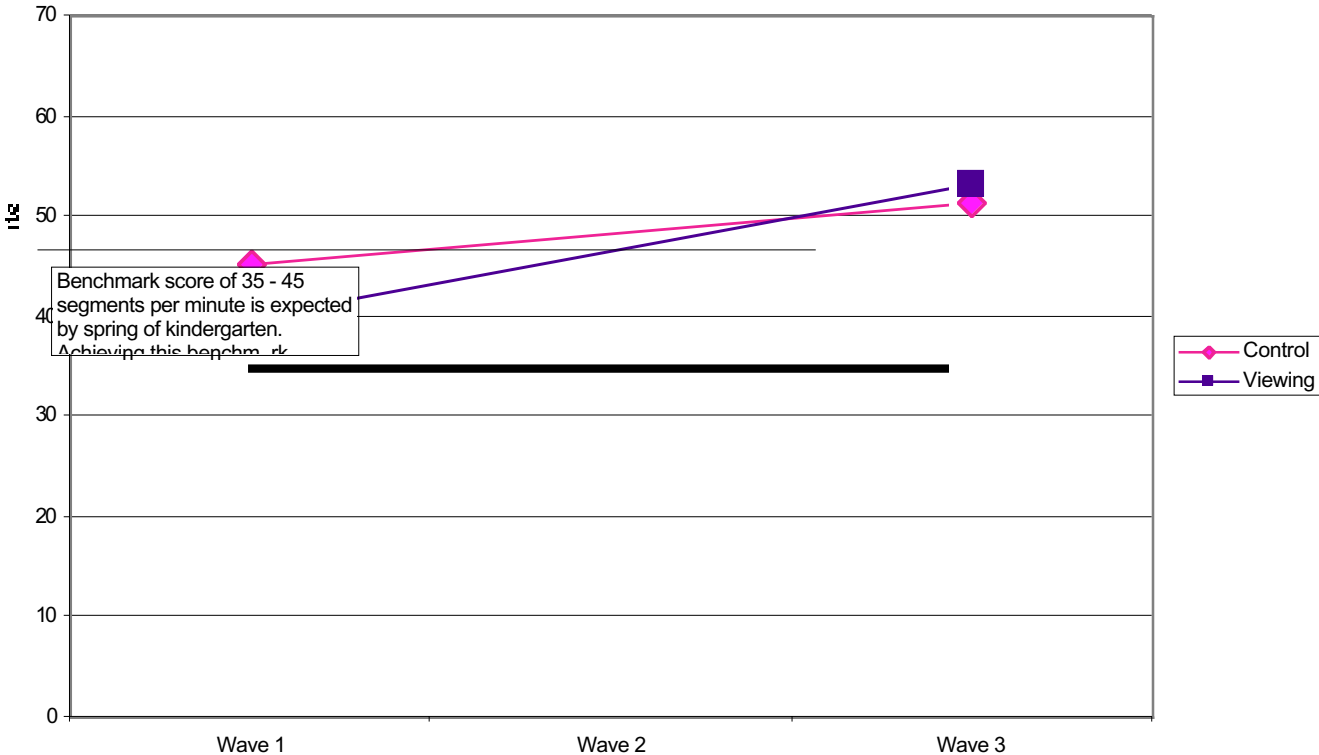
**Figure 5. Growth in Letter Naming--First Grade**



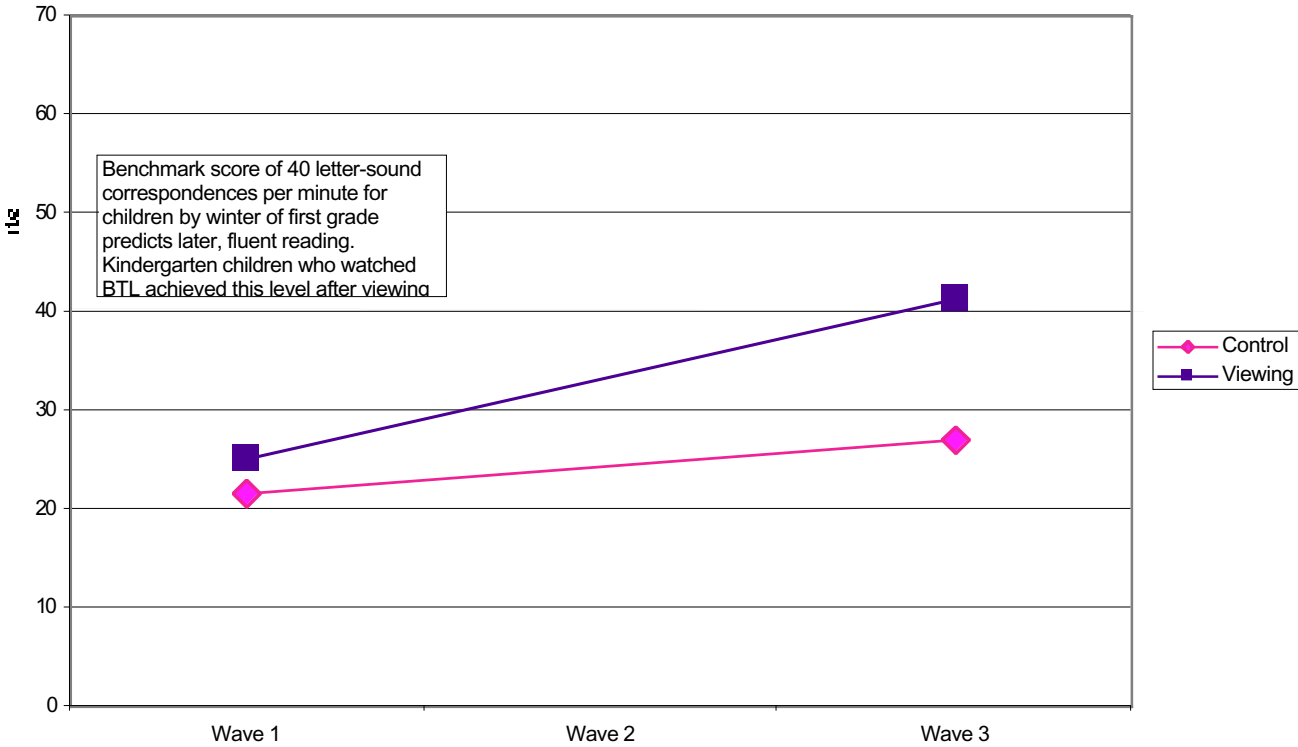
**Figure 6. Growth in Phonemic Segmentation Fluency--Kindergarten**



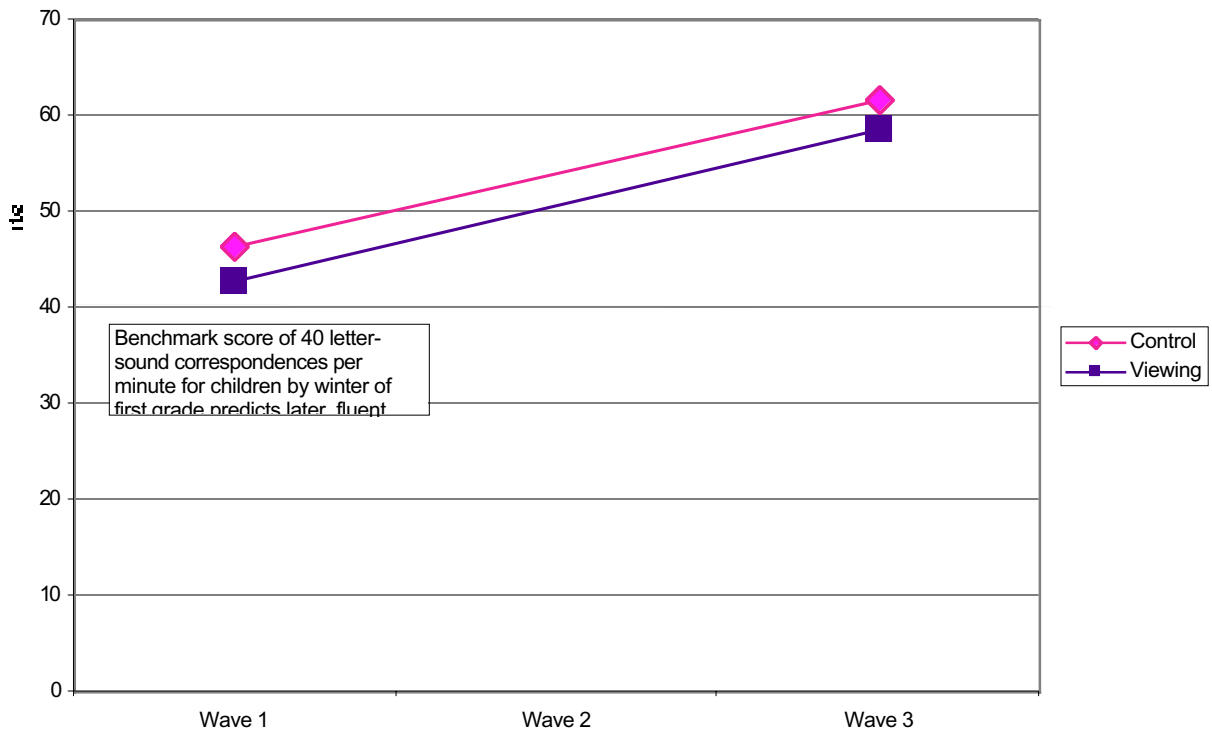
**Figure 7. Growth in Phonemic Segmentation Fluency--First Grade**



**Figure 8. Growth in Nonsense Word Fluency--Kindergarten**



**Figure 9. Growth in Nonsense Word Fluency--First Grade**



Standardized Early Reading Abilities

As shown in Figure 15 for kindergarten children, the *BTL* viewing group's raw scores on the TERA-2 were significantly higher on the post-test when compared to the control group.<sup>12</sup>

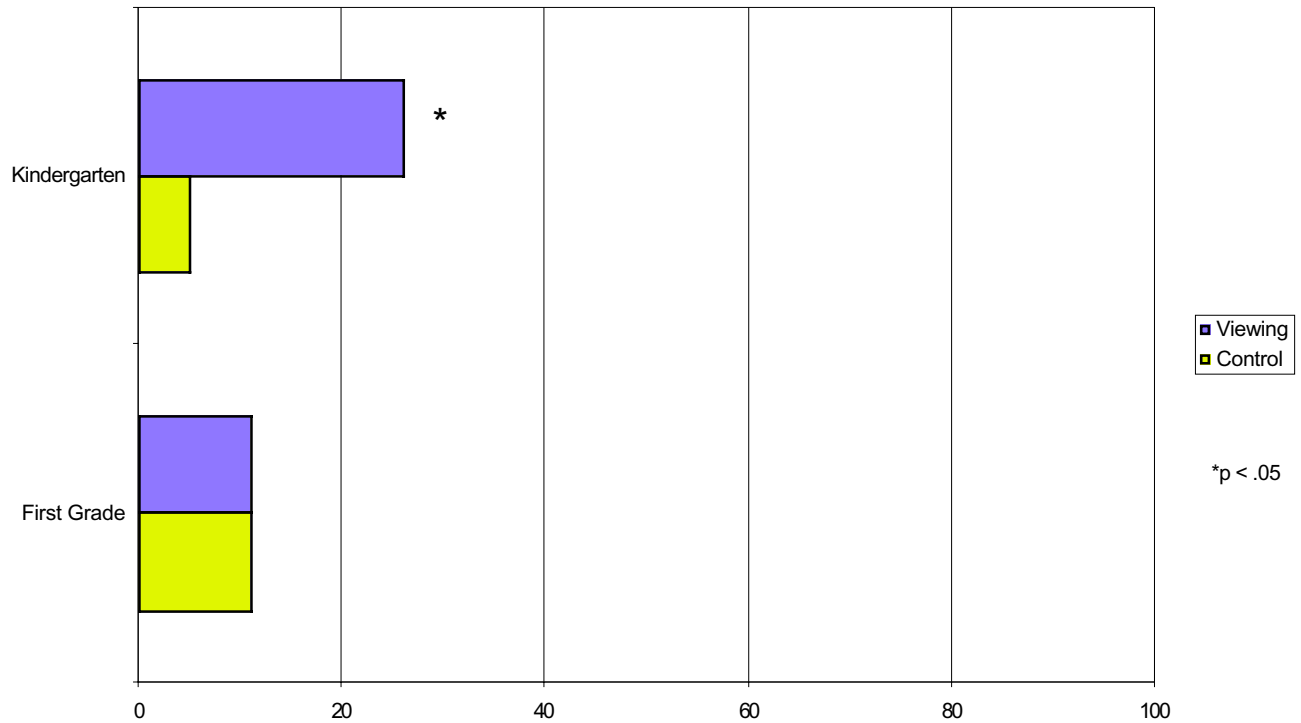
There were no statistically significant differences between the viewing group and the control group for first graders on the TERA-2.

**Standardized Early Reading Abilities Conclusion.** Finding significant differences on a normative general outcome measure favoring kindergarten children who watched *BTL* after 3 \_ to 4 weeks' worth of intervention was a surprising and promising result. Although the difference was just 2 raw score points, it was enough to differentiate the groups and, perhaps, place children on an accelerated trajectory for early reading abilities.

For first grade children, no differences emerged, most likely due to the fact that these children already knew a lot of what the show was teaching. For these children, the items administered from the TERA-2 consisted of higher order skills (e.g., passage comprehension, sentence structure), not directly featured on the show.

<sup>12</sup>  $F(1, 70) = 3.98, p < .050$

**Figure 10. Percent Gain in TERA-2 Raw Scores from Pre-test to Post-test**



Parent-Reported Frequency of Media Activities

See Figures 11 (kindergarten) and 12 and 13 (first grade) for pre-test to post-test change scores.

- Looking at books alone

No differences were noted for kindergarten children.

For first grade children, those reading at or above grade level who watched *BTL* spent significantly more time reading books alone when compared to the control group<sup>13</sup>. For those first graders reading below grade level, those children who did not watch *BTL* spent more time reading books alone when compared to the viewing group. Three percent of the variance in looking at books alone was accounted for by watching *BTL* while 4% of the variance was accounted for by child's initial reading skill.

<u>Media Use Frequency Scale</u>	
1	= never
2	= once a month or less
3	= 2 or 3 times a month
4	= 1 or 2 times a week
5	= 3 or 4 times a week
6	= once a day
7	= several times a day

- Adult reading to child

<sup>13</sup>  $F(2, 71) = 2.41, p < .022$

No differences in the amount of time an adult spent reading to the child were noted for kindergarten or first grade children.

- Child asks to be read to

No differences in the frequency with which children asked to be read to were noted for kindergarten or first grade children.

- Adult suggests child read a book

Parents of both kindergarten and first grade children in the control and viewing groups did not differ in the frequency with which they suggested their child read a book.

- Child writes letters, notes, or stories

Kindergarten children in the viewing group wrote significantly more letters, notes, and stories at the end of the study when compared to kindergarten children in the control group.<sup>14</sup> Six percent of the variance in children's writing at home was accounted for by watching *BTL*.

There were no differences noted for first grade children in the control and viewing groups.

- Child goes to library or bookstore

Kindergarten children who watched *BTL* spent more time going to the library or bookstore at the end of the study when compared to kindergarten children who had not watched the program<sup>15</sup>. Eleven percent of the variance associated with going to the library or bookstore was accounted for by watching *BTL*.

No differences were noted for first grade children.

- Child reads/looks at magazines

No differences in the amount of time children spent reading magazines were noted for kindergarten or first grade children.

- Child uses videogames

There were no differences at the end of the study for kindergarten and first grade children in the control and viewing groups in the frequency with which they used videogames at home.

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<sup>14</sup>  $F(1, 66) = 8.93, p < .038$

<sup>15</sup>  $F(1, 66) = 6.13, p < .005$

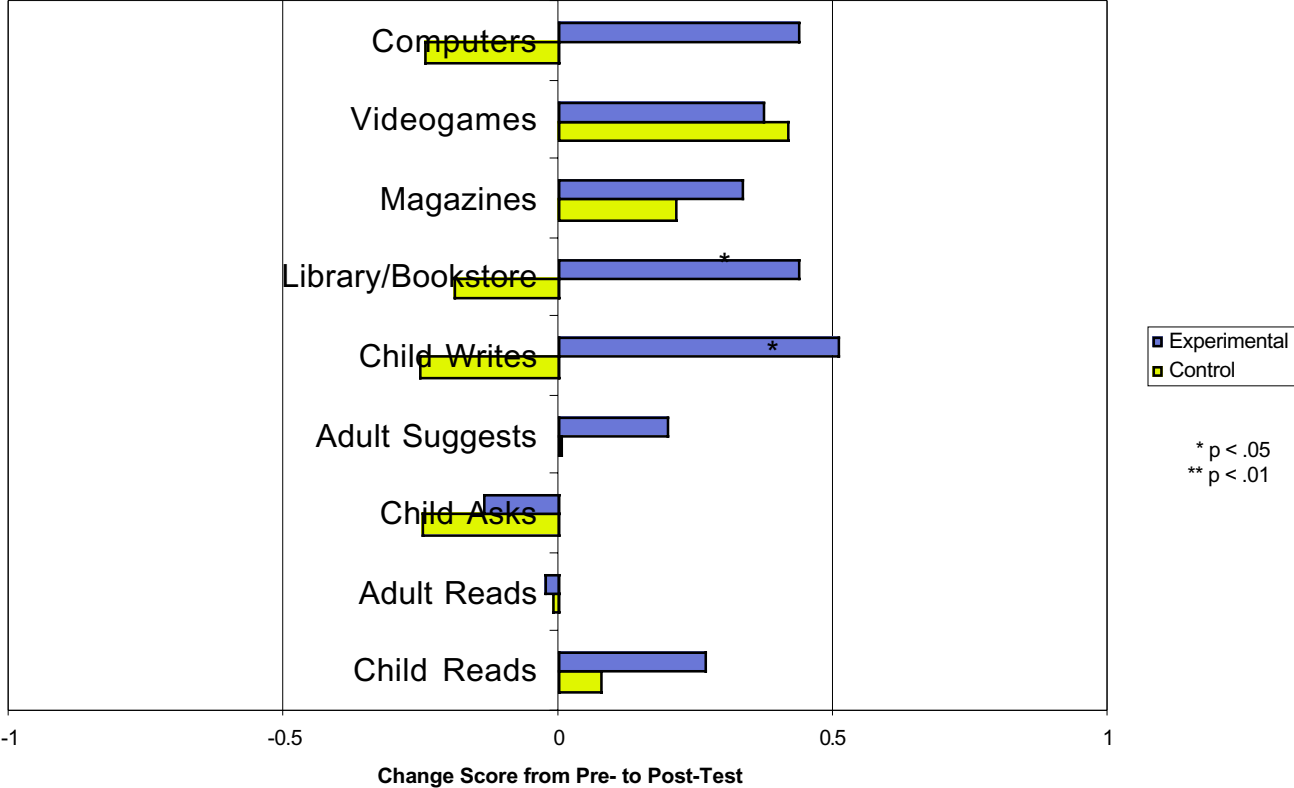
- Child uses a computer

There were no differences at the end of the study for kindergarten and first grade children in the control and viewing groups in the frequency with which they used computers at home.

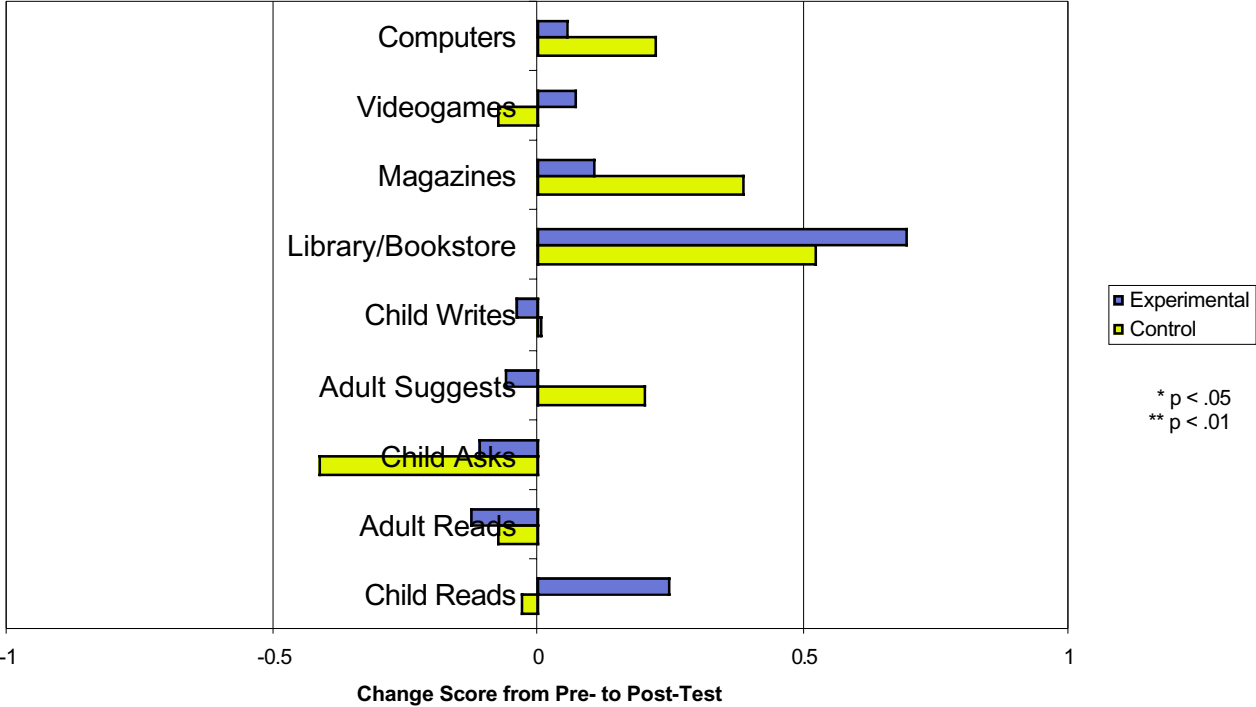
**Parent-Reported Frequency of Media Activities Conclusion.** Based on the results presented above, there appears to be some changes in frequency of media use for kindergarten children who watched *BTL*. Increases in writing stories, notes, and letters as well as increases in trips to the library or bookstore were significantly greater for those kindergarteners who watched the show, averaging about a 1-2 day per week increase and accounting for 6% and 11% of the total variance associated with writing and trips to the library or bookstore, respectively. However, as the graphs highlight, children who watched the show had increases in almost all print-related activities, while those in the control group stayed the same or declined.

For first grade children, differences were noted only for reading books alone and these differences were qualified by an interaction with child's reading skill. For those children reading at or above grade level, children who watched *BTL* read more alone when compared with the control group. For children reading below grade level, those who watched the show read alone less after the intervention than those who did not watch the show. The viewing group has a higher percentage of children reading below grade level, which, perhaps, contributes to less desire to participate in print-related activities.

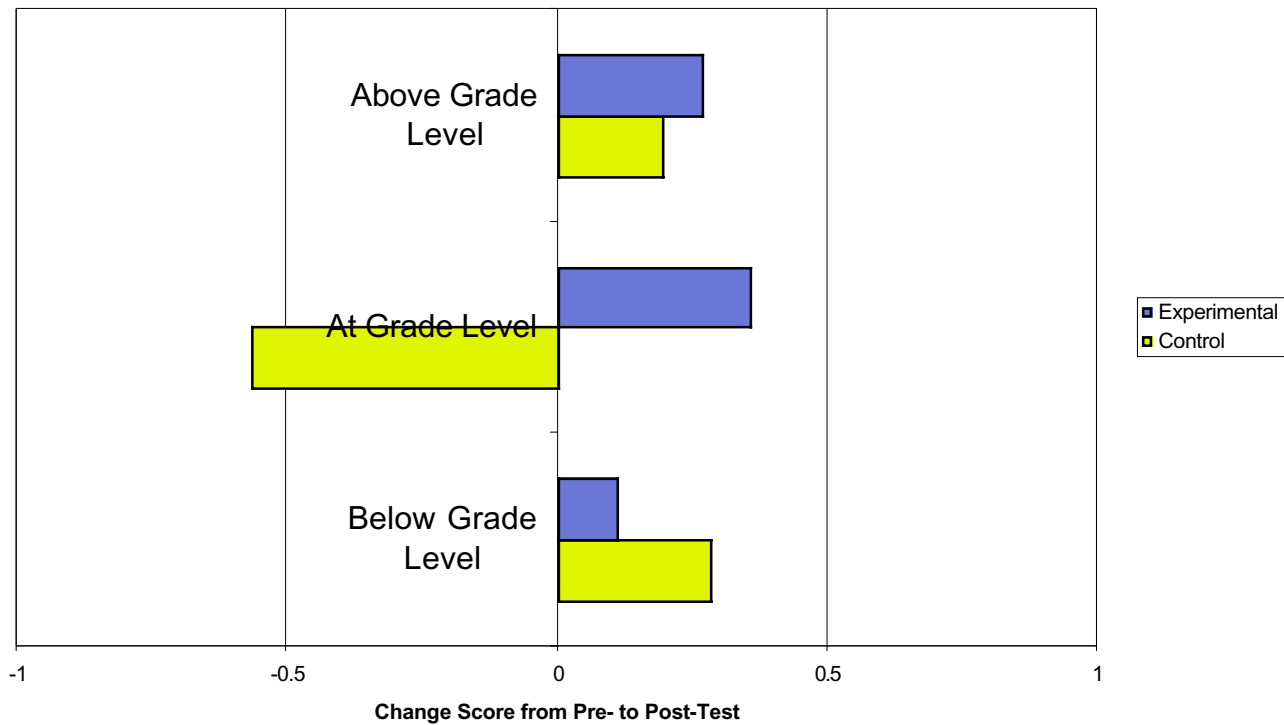
**Figure 21. Parent Reported Frequency of Media Activities--Change Scores from Pre-Test to Post-test for Kindergarten**



**Figure 12. Parent Reported Frequency of Media Activities--Change Scores from Pre-Test to Post-test for First Grade**



**Figure 13. Frequency of Child Reading Alone--First Grade Only**



Teacher-Reported Frequency of Classroom Behaviors

- Reads or looks at books during free time

Differences in amount of time spent reading or looking at books during free time for kindergarten children were related to their initial reading ability. That is, children who were reading above grade level read books more frequently than children reading at grade level, who, in turn, read more books than children reading below grade level<sup>16</sup>. Reading skill accounted for 10% of the variance in choosing to read or look at books during free time.

There were no differences in reading during free time for first grade children.

- Talks with others about books

There were no teacher-reported differences in talking with others about books for kindergarten children.

<sup>16</sup>  $F(2, 70) = 3.94, p < .024$

Differences in amount of time spent talking about books with others for first grade children were related to their initial reading ability. That is, children who were reading above grade level talked more frequently about books than children reading at grade level, who, in turn, talked more frequently about books than children reading below grade level.<sup>17</sup> Twenty percent of the variance associated with talking about books was accounted for by child s reading skill.

- Writes during free time

There were no differences in time spent writing during free time for kindergarten children.

First grade children who watched *BTL* spent significantly more time writing during their free time than first grade children who did not watch the program.<sup>18</sup> Watching *BTL* accounted for 13% of the total variance in writing during free time as did child s initial reading skill.

<u>Teacher-Reported Behaviors</u>
1 = never
2 = sometimes
3 = often

- Uses the computer during free time

Kindergarten children who watched *BTL* spent significantly less time using the computer during free time than kindergarten children who did not watch the program<sup>19</sup>. Watching *BTL* accounted for 7% of the total variance associated with using the computer during free time.

There were no differences in computer usage during free time for first grade children.

- Talks about TV characters or shows

There were no differences in the amount of time spent talking about TV characters or shows for kindergarten or first grade children.

**Teacher-reported Frequency of Classroom Behaviors Conclusion.** Kindergarten children who watched the show spent significantly less time using the computer throughout the day than kindergarten children who did not watch the show. Perhaps those children who did not watch the show were able to spend those 30 minutes using a computer while the children who did watch the show no longer had that time to spend using the computer. Moreover, the amount of variance accounted for by watching *BTL* was also small, about 6%. Finally, these changes may be due simply to teacher perceptions related to classroom assignment to control or viewing group and not to any actual changes in behavior.

First grade children who watched the show spent more time writing during their free time than those who did not watch the show. These findings may again be related to teacher perceptions, or they may reflect true changes, given that watching *BTL* was associated with 12% of the total variance in writing during free time.

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<sup>17</sup>  $F(2, 76) = 2.94, p < .000$

<sup>18</sup>  $F(2, 76) = 2.89, p < .001$

<sup>19</sup>  $F(1, 70) = 4.90, p < .030$

Other results were related mainly to the child's initial reading skill. That is, children reading above grade level read more during free time or talked about books more with others than those reading at or below grade level.

### Program and Character Appeal

The program and character appeal interviews are based on the subsample of children who were assigned to the viewing group. There were 39 kindergarten children and 44 first grade children who completed the interview (i.e., 3 kindergarteners did not complete the interview due to unavailability while all first grade children did complete the interview). The Final Report Supplement contains actual child, parent, and teacher responses/comments about the show and its characters.

#### Children's Interviews General Program Appeal

- *How Much Did I Like the Program in General?*

In general, 95% liked the show (either a lot or a little) while 2% did not like the show (a lot or a little). There were no significant differences across gender and grade level.

- *Will I Watch This Program At Home?*

Ninety-three percent of the children reported that they would like to watch *BTL* at home, while 5% said they would not like to watch it at home. There were no significant differences across gender and grade level.

- *How did Between the Lions Compare to My Favorite Show?*

Children were first asked what their favorite television show was. This question was then followed up with How did *BTL* compare to your favorite show? Did you like it more, less, or the same? Seventeen percent of the students said their favorite show was *Between the Lions*, 12% of the students favored *Pokemon*, 5% said they liked *Rugrats*, 5% chose *Arthur*, 6% said *Cartoons*, in general, and 4% liked *Scooby Doo*. Some other less frequently mentioned shows ( $\leq 1\%$ ) were *Power Rangers*, *Buffy the Vampire*, *Toy Story*, and *Power Puff Girls*.

For those who did not choose *BTL*, 70% of the students said they liked *BTL* as much as their favorite show, 12% liked *BTL* more and 18% said they liked it less than their favorite show. Among those who liked *BTL* less than their favorite shows, 3 of 12 chose *Pokemon* as their favorite show. Other choices were *Batman and beyond* (1), *Star Wars* (1), *Cat Dog* (1), *the Simpsons* (1), *Men in Black* (1), *The Pirate* (1), *Dragon Tales* (1), *Super Friends* (1) and *Toy Story* (1).

**Gender.** Females were more likely to say that they liked *BTL* more than their favorite show than males (16% versus 8%), also fewer females said they liked *BTL* less. Among students who liked *BTL* less than their favorite show, 7% were female kindergarteners and 5% were female first graders.

**Grade level.** Within gender, there were differences by grade level, with more first grade boys (44%) reporting liking the show less.

Among the students who did not choose *BTL* as their favorite show, most of them liked *BTL* as much as or more than their favorite shows. For male kindergarteners, 67% liked *BTL* as much, 13% liked *BTL* more and 20% liked it less than their favorite program. Fifty-six percent of the first grade male students liked *BTL* as much as their favorite show.

Among the female students, 73 % of the kindergarteners liked *BTL* the same, 20% liked it more and 7% liked it less than their favorite shows, whereas 82% of the female first graders liked it the same, 14% liked it more and 4% liked it less than their favorite show.

- *How Much Do I Like the Print on Screen?*

Overall, 69 of the students (83%) indicated that they liked the print on screen. There were no significant differences across gender and grade level

- *Did I Learn New Words?*

The majority of the students (75%) said they learned new words from the show; however, 69% could not remember the new words they learned. Ten students (12%) said they learned one new word, 7 (8%) learned two new words and 4 (5%) of the students said they learned 3 new words. Two students remembered 4 new words, 1 remembered 5 words and two remembered 6 new words they learned from the programs. Examples of words learned include: intelligent, alligator, survival, begin, glad, shark, water, and boat. (Note. This question was asked after at least one week had passed between the end of the viewing phase and the program appeal interviews.)

### Children s Report Specific Character Appeal

- *Knowledge of the Character s Names*

When shown pictures of the characters and asked to name them, the most recognized characters (by name) were Cliff Hanger (78%), Click (75%), Smartini (70%), Sam Spud (61%), Chicken Jane (54%), and Dr. Ruth (54%). The least recognized were Busterfield (11%), the Vowelles (11%) and Fred (1.2%), most likely because these names were not frequently mentioned.

**Gender.** Interestingly, children generally recognized characters that were of the same gender; male students recognized male characters more and vice versa. Fifty-eight percent of the girls recognized Leona whereas 37% of the boys recognized her while 76% of the boys recognized Sam Spud and 64% of the girls recognized him. The exception was Dr. Ruth who was recognized by more male students (61%) than female students (50%). Significant differences were observed for first graders recognizing male characters, more first grade boys knew these male characters than girls<sup>20</sup>

**Grade level.** First graders were able to name Cleo<sup>21</sup> and Gawain s Word<sup>22</sup> correctly more often than kindergarteners. Among first graders, girls recognized Leona more than boys<sup>23</sup> while boys recognized Lionel more than girls<sup>24</sup>.

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<sup>20</sup>  $t(42) = 2.54, p < .015$

<sup>21</sup>  $\chi^2(1, N = 44) = 4.17, p < .041$

- Rating of Each Character and Why/Why Not

**Summary.** Overall, 98% of the students rated Cliff Hanger favorably. Click was rated favorably by 94% of the students and Gawain s Word and Leona were each rated favorably by 93% of the students. Buster was rated favorably by 63% of the students.

**Gender.** Among the children, there were significant differences in rating scores with girls rating Dr. Ruth<sup>25</sup>, Chicken Jane<sup>26</sup>, Cleo<sup>27</sup>, and Leona<sup>28</sup> more favorably and boys rating Cliff Hanger<sup>29</sup> more favorably.

**Grade Level.** All of the first grade female students reported liking Leona a lot; Click, as well as Theo, were also liked a lot by 96% of these first grade girls. The characters least liked by the female students were Busterfield (54% liked him a lot) and Sam Spud (54% liked him a lot) by first graders and Busterfield (69% liked him a lot) by the kindergarteners.

All Kindergarten boys liked Gawain s Word, Fred and Cliff Hanger a lot and, just like their female colleagues, liked Busterfield the least (65% liked him a lot). All of the first grade boys reported liking Cliff Hanger a lot. The characters these boys liked least were the Vowelles (50% liked them a lot). This was the lowest percentage for any of the characters in the program.

- Are There Any Parts That I Would Change About the Show?

Fifty-six percent of the children said they did not dislike any parts of the programs while 10% disliked the Vowelles, 5% disliked Busterfield and Sam Spud, and 4% disliked Lionel. The other eleven characters were selected by less than 4% of the children as indicated by the table below.

Character/Part Disliked	% Disliked (All)	% Disliked (K)	% Disliked (1)
None	56	54	62
Vowelles	10	5	11
Busterfield	5	5	3
Sam Spud	5	5	5
Lionel	4	3	7
Other Characters/Parts	20	28	13

- Who Would I Invite to a Birthday Party?

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<sup>22</sup>  $\chi^2(1, N = 44) = 12.02, p < .001$

<sup>23</sup>  $\chi^2(1, N = 44) = 6.63, p < .010$

<sup>24</sup>  $\chi^2(1, N = 44) = 14.58, p < .000$

<sup>25</sup>  $t(81) = -2.70, p < .009$

<sup>26</sup>  $t(81) = -3.75, p < .000$

<sup>27</sup>  $t(81) = -4.66, p < .000$

<sup>28</sup>  $t(81) = -4.44, p < .000$

<sup>29</sup>  $t(81) = 2.03, p < .046$

The largest percentage of students chose Click (22%) as the character to invite to their birthday party. Other choices included Leona (18%) and Dr. Ruth (9%). A small number (11%) said they would invite all the characters, and 2% said they would not invite any of the *BTL* characters. There were no differences related to gender and grade.

- *Who Would I Want to Talk to If I Was Sad?*

When asked which character they would talk to if they were sad, 21% of the students chose Click, 16 % would talk to Dr. Ruth, 12 % chose Cleo, another 12% picked Leona, 11% chose the Great Smartini and 5% chose Sam Spud. There were no differences related to gender and grade.

Children listed several reasons why they chose these characters. The most common reason (41%) was because the character was nice or helpful. Eight percent of the students said their choice was because the character was funny. A few students (1%) said it was because of a performance related issue, that is, something relating to a specific action by the character in one of the program episodes (e.g., he ate all the popcorn).

- *Who Would I Want to Read Me a Story?*

Overall, the most frequently chosen character to read a story was Lionel (30%). Cleo was chosen by 24% of the students, Click by 10%, Theo by 8% and Dr. Ruth by 6% of the students.

When asked why they chose a particular character as the one they would like to read them a story, 30% of the students said they did not know or did not have an answer, 23% said it was because the character was a great/good reader, 15% said they chose a character because they were helpful or nice, and 6% said it was because the character was funny.

**Gender.** Twenty-seven percent of the male students chose Lionel as the one they would like to read them a story, 16% chose Click, 14% chose Theo and 11% of them chose Dr. Ruth. The eleven other characters were chosen by less than 6 % of the male students. Most of the female students (40%) chose Cleo as the character they would like to read them a story, 33% chose Lionel and Leona was chosen by 9% of the girls. Other characters were chosen by less than 5 % of the female students. Fred was not chosen by any of the female students, Leona was not chosen by any of the male students.

**Grade Level.** Despite being one of the most frequently selected characters to read a story by the group as a whole, Lionel was not selected by any of the kindergarten boys as the one they would want to read them a story. Dr. Ruth was not chosen by any of the girls in kindergarten, Theo was not chosen by any of the first grade girls and only male students chose Smartini.

**Children s Report Character and Program Appeal Conclusion.** The children in this project generally liked *BTL* and the characters in the show. Although there were some characters liked less than others, the majority of the kids still reported liking these characters (e.g., Busterfield 63% liked him). The characters that seemed to be disliked the most were the Vowelles, Busterfield, Sam Spud, and Lionel; however, the percentage of children who disliked these characters was low (none greater than 11%). Most children reported liking the print on the screen and learning some of those

new words, although just under a third were able to recall what some of those words were. Over half of the children who watched the show reported that they would change nothing about the show.

Children were able, for the most part, to recall the names of their favorite characters. Children's reasons for liking or disliking characters varied and were oftentimes contradictory: one child might like the Great Smartini because he puts things in his pants while another child reports not liking the Great Smartini for the same reason.

Some gender differences emerged as well. Girls, for the most part, liked the show more than boys and fewer of the girls reported liking it less. First grade boys knew more of the male character's names than first grade girls.

Teacher's Report

- Students' Favorite Episodes

When asked to indicate which episodes were favorites of their students, each teacher circled more than one episode. The fewest episodes circled were three and the most were all seventeen. The only episode circled by all five teachers was **Fuzzy Wuzzy**. Other episodes indicated by the teachers as their students' favorites were: **Shooting Stars** (4); **Lionel's Antlers** (4); **Pecos Bill** (4); **Popcorn** (3), **Pandora's Box** (3), **Cry Wolf** (3), **Magic** (3), **Farmer Ken's Puzzle** (3), and **Hug Hug Hug** (3).

Favorite Puppet Characters

Responses on this question ranged from two characters circled by one teacher to all seven characters circled by two teachers. **Leona** was the only character circled by all five of the teachers. **Theo**, **Cleo**, **Lionel**, and **Click** were all circled by four of the five teachers. **Busterfield** was circled by two of the five teachers.

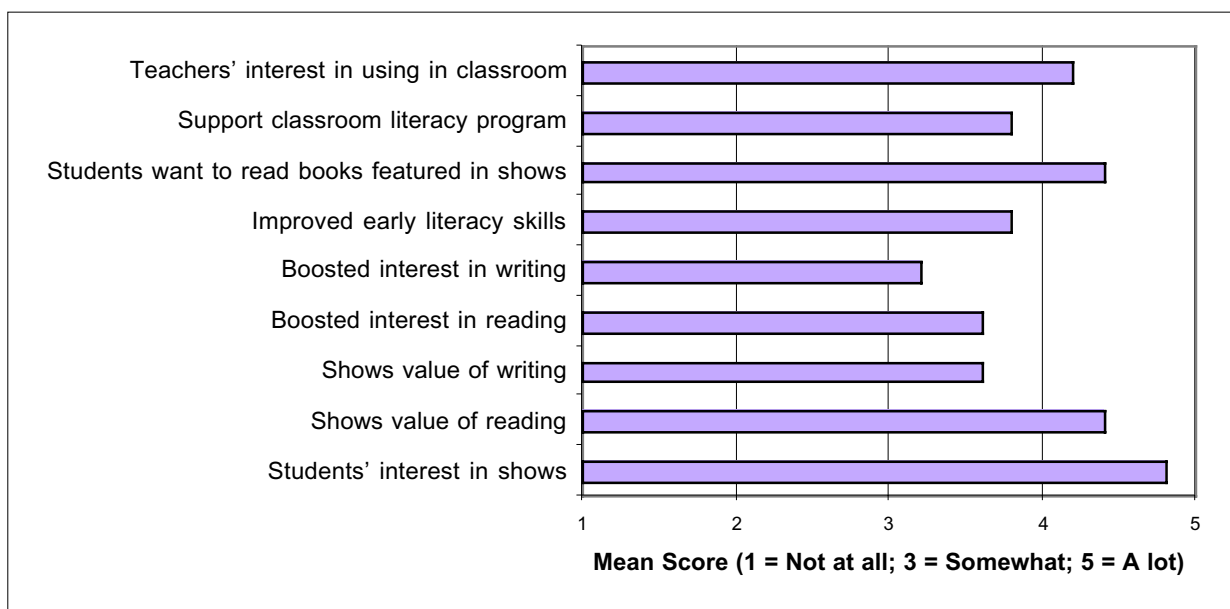


Figure 14. Teacher Reported Appeal of BTL

- Students Favorite Recurring Segments

Responses on this question ranged from three segments circled by one teacher to all nine segments circled by two teachers. **Cliff Hanger** was the only segment circled by all five of the teachers. **Vowelles, Sam Spud, Dr. Ruth,** and **Chicken Jane** were circled by four of the five teachers. While only circled by three of the five teachers, teachers who indicated **Arty Smartypants** commented that this was their students most favorite segment ( Very, Very favorite , They loved them all especially Arty ).

- Repetition of Parts From One Program to Another

Four of the teachers responded in positive ways with comments such as: They like it , They loved it , They remembered the repetition, and many of them were proud when they knew the answer or remembered the sequence . One teacher reported that her students complained when they viewed repeated parts of the program.

- Features of the Programs Not Liked by Students

Three of the five teachers responded to this question. Their responses were: They thought Cliff Hanger should just let go , Child didn t like Vowelles — boy , and None that I could tell, I believe they loved all the parts .

- References to the Stories, Characters, or Segments During Other Activities

Three of the five teachers answered yes to this question, the other two teachers answered no . Examples provided by the three teachers who answered yes include: Silent E was referred to while the children were reading. Arty Sartypants was referred to during free-choice play time . The children sang songs from the program during the day.

- Features of the Program That Teachers Liked

Comments on this question ranged from general the students loved the music and the puppets to specific the phonemic awareness aspects, working with blends and isolated letter sounds . Two teachers simply named characters or segments Silent E and Fred . Another specific comment made by one of the teachers was: Gawains Word- building and changing words was excellent .

- Features of the Program That Teachers Did Not Like

Three of the five teachers answered No to this question. Comments by both the teachers who answered Yes referred to the program skipping around too much for the children to fully grasp the concepts being taught.

- Particular Episodes or Segments Useful For Classroom Instruction

Of the three teachers who responded to this question, comments included: Gawains Word, Dr. Ruth, and Vowelles , I would use the segments when I am teaching specific vowel, etc as reinforcement , and All of them!! They all seem to fit into some theme or area of instruction .

- Materials For Extended Teacher and Learning Experiences

Teachers indicated what materials would be helpful by placing check marks on a list of materials. **Storybooks, Songs (CD or Tape), and activity sheets** were checked by all five of the teachers. Other materials included: **Materials for parents (4) and Teacher s guide (4), Computer software (3) and Recommendations for related trade books (3), Scripts (1) and Web Site (1).**

- Additional Comments

Two of the five teachers provided additional comments: I loved the show. It was so nice to see a healthy television program that meets the needs of so many children learning on a myriad of levels and abilities. Very current, up-to-date ideas and curriculum. I really appreciate the opportunity to participate. What a great show .

**Teacher Appeal Conclusion.** General program appeal, as measured by this post-viewing questionnaire for teachers was very positive. Favorable comments were made by nearly every teacher regarding their students interest in watching the episodes, and the program s usefulness in enhancing their students reading skills. In addition, most of the teachers referred to specific characters and segments of the program that their students especially liked, or were particularly appealing, or helpful. Examples include: **Arty Smartypants, Cliff Hanger, Fred, Click, Silent E, The Vowelles, and Chicken Jane.**

Negative comments revolved around the repetition of certain parts of the program from one episode to another and were based on complaints from the children. Other negative indicators were few and far between, some of which are indicated by slightly lower scores, as measured by the five point scale on the questions: **To what extent do you think this series shows the value of writing? To what extent do you think this series boosted your students interest in reading? To what extent did viewing the shows help improve your students early literacy skills?**

## DISCUSSION

**Was the Show Effective in Helping Children Develop Emergent Literacy Skills?** The most prominent finding in this project was that kindergarten children who watched *Between the Lions* performed significantly better on almost all outcome measures of reading achievement than those kindergarten children who did not watch the program. More specifically, kindergarten children demonstrated significant growth on targeted skills featured in the program including concepts of print, phonemic awareness, and letter-sound correspondences. This growth was seen across each type of assessment: growth in the specific content featured in the different episodes; accelerated rates of growth in key emergent literacy skills; and normative growth on a generalized measure of reading ability.

Discovery of the alphabetic principle, or knowledge of letters, sounds, and letter-sound correspondence, is a necessary condition for full mastery of reading (Byrne & Fielding-Barnsley, 1989, 1995). Preliminary evidence suggests that *BTL* played a role in helping the young children in this project accelerate the acquisition of the alphabetic principle. Specifically, kindergarten children who watched approximately half the first season of *BTL* were able to identify more letters and read more words. In addition, their understanding of concepts of print was enhanced (both for program specific

content and more generalized content). Finally, their abilities to segment words into phonemes (i.e., sounds) and phonologically recode nonsense words, two skills highly predictive of later, fluent reading, were significantly accelerated over those children who did not watch the program.

For first grade children, the results were mixed and less dramatic. Many of the patterns were there, and some significant results were obtained (i.e., rate of segmenting growth). Lack of additional findings may be due to a ceiling effect, that is, these children generally performed at or near the tops of our scales. Therefore, there was little room to measure improvement. Another plausible reason, shared by the first grade teachers participating in the study, was that these children already had the skills featured in the show (e.g., blending, segmenting, letter-sound correspondences, word recognition of sight words, c-v-c words). Finally, this data was collected during the last part of the school year, after nearly a full year of instruction in reading. Results may have been different if the data were collected in the fall of first grade.

For those first graders experiencing difficulties learning to read, viewing 17 episodes was probably not enough to improve their scores significantly. Continuing to watch the program may result in growth in emergent literacy skills and, perhaps, having it referred to and connected to other aspects of a literacy program is an issue that needs to be considered in future work.

Taken as a whole, these results are promising, suggesting that this program does lead to positive changes or growth in key early literacy skills predictive of later, fluent reading. Given that this program airs on public television, a universally available, free technology with enormous potential to reach all children, *Between the Lions* can help to reinforce, motivate and extend early literacy instruction, both in the classroom and within the child's home.

**Did Children Like the Characters and the Show?** Overall, 95% of children who rated the show and its characters reported liking it while 17% of these children listed *BTL* as their favorite television show at the end of the viewing. Average ratings for individual characters were greater than 4.0 (on a 5-point scale) with the exception of Busterfield, whose likeability averaged 3.7. When asked if they would change any parts of the program, children were most likely to comment that they did not like the Vowelles and Busterfield. Finally, three-quarters of the children reported learning new words from the show, while 31% were able to list any of those words.

There were some gender and grade level differences noted in program and character appeal. When asked to compare their favorite show to *BTL*, the vast majority of girls and boys reported liking *BTL* the same or more than their favorite show; however, a greater percentage of boys reported liking *BTL* less. Girls also tended to remember female characters more while boys remembered male characters more. This was especially true for first grade boys. Finally, the greatest percentage of girls reported that they would invite Leona to their birthday party, would talk to Dr. Ruth when sad, and would have Cleo read them a story. Boys, on the other hand, were more likely to want Cliff Hanger or Click to attend their birthday party, talk with Lionel when they were sad and have Click read them a story.

Most of the teachers who watched the show also held favorable impressions of it. They reported a desire to continue using it as a supplement to their regular curriculum and requested additional materials as well.

**What Limitations Do These Findings Have?** There are two limitations that moderate these results. First, due to teacher preferences and logistics, it was necessary to randomly assign children to

control and viewing groups by classroom. Although unlikely, given teacher instructions not to discuss the program and frequent observation by our staff, it is possible that teachers in the viewing group differed in their instructional approach either as a result of the show or due to differences in teaching, or both. We did include controls for pre-test abilities that served to reduce classroom differences. However, we may not have been able to eliminate all of this bias. In addition, there may be other third variables that we did not measure that could account for the observed differences.

Second, the children who participated in this project were, for the most part, European American children from lower middle to middle class families with access to many types of media: books, computers, cable television. Therefore, the effectiveness of this program may not generalize to children from other backgrounds (e.g., minority or economically disadvantaged). More research is needed to address this issue.

**What Recommendations Would These Findings Suggest?** Gender differences did emerge in some of the character and program appeal items, suggesting that boys, especially first grade boys, were more likely to report not liking the show as much as girls and younger boys. This finding coupled with the lack of convincing evidence for demonstrated gains across skill areas for first graders suggests that more attention may be needed if the target audience remains 4 — 7 year olds. Earlier television research has found that boys, in particular, benefit from educational television more than girls (Anderson, Huston, Schmitt, Linebarger, & Wright, in press). One reason for this benefit may be that the group most at risk, or the group farthest behind, usually gains the most from an intervention. Therefore, some adjustments to the program and/or its characters may be warranted to help attract these boys. Although it is unclear exactly what these adjustments might be, we did note that when children who reported not liking the program were asked what their favorite program was, all identified violent television programs or movies (e.g., Pokemon, Men in Black). However, we did not find gender differences in any of the outcomes.

One suggestion that would help identify what elements attract or repel children from this series is to incorporate formative evaluation components into the production process. That is, it would be helpful to try out different segments/characters with different populations as the program is being developed. In this way, it could be determined whether the program is reaching and attracting the desired audience.

Additional research is also needed in several different areas. Because the findings for kindergarten children were fairly convincing, it would be advantageous to extend this research down to prekindergarten children, especially given the focus on early literacy skills in this show. Much of the earlier research examining literacy interventions demonstrates that teaching the kinds of skills found in this show can produce large gains in phonemic awareness and letter-sound correspondence for preschoolers (National Research Council, 1998). Another area for research would be with children who are experiencing reading difficulties. Other educational television research with children who have academic difficulties has found that these children benefit from smaller group sizes while watching the program. Teacher or parent involvement while viewing and after viewing, successful for other educational television shows, also needs to be explored.

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## APPENDICES

### Appendix A: Statistical Support Appendix B: Interviews and Questionnaires

#### APPENDIX A: STATISTICAL SUPPORT

Child Outcomes Statistical Tables  
Means, Standard Deviations, and Adjusted Means Tables

#### KINDERGARTEN RESULTS

Outcome Measures

- Parent-Reported Frequency of Print Behaviors

Table A1

Analysis of Covariance for Condition and Initial Reading Skill--Kindergarten

Source	df	MS	F	Sig.	d
<i>Looking at Books Alone</i>					
Parent s Education (covariate)	1	.50	.78	.381	.01
Pretest frequency (covariate)	1	36.69	56.36	.000	.45
Condition (C)	1	1.12	1.72	.194	.02
Initial Reading Skill (S)	2	.29	.45	.639	.01
C x S	2	1.32	2.02	.140	.05

Error	70	.65			
<i>Adult Reading to Child</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	1.43	3.25	.076	.04
Pretest frequency (covariate)	1	23.86	54.11	.000	.43
Condition (C)	1	.55	1.25	.268	.01
Initial Reading Skill (S)	2	0	.19	.831	.00
C x S	2	0	.12	.890	.00
Error	70	.44			
<i>Child Asks for Reading</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	1.50	1.37	.245	.02
Pretest frequency (covariate)	1	44.30	40.58	.000	.37
Condition (C)	1	.70	.64	.426	.01
Initial Reading Skill (S)	2	0	.00	.995	.00
C x S	2	3.83	3.51	.035	.09
Error	70	1.09			
<i>Adult Suggests Child Read a Book</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.11	.10	.758	.06
Pretest frequency (covariate)	1	27.21	23.62	.000	.10
Condition (C)	1	.18	.16	.694	.07
Initial Reading Skill (S)	2	.25	.22	.803	.08
C x S	2	.71	.62	.542	.15
Error	70	1.15			
<i>Child Writes Letters, Notes or Stories</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	3.03	1.67	.201	.03
Pretest frequency (covariate)	1	109.79	60.40	.000	.44
Condition (C)	1	8.29	4.56	.036	.06
Initial Reading Skill (S)	2	2.88	1.58	.212	.08
C x S	2	3.50	1.93	.153	.05
Error	70	1.82			
<i>Child goes to Library or Bookstore</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.14	.20	.652	.00
Pretest frequency (covariate)	1	16.66	23.90	.000	.25
Condition (C)	1	6.13	8.79	.004	.11
Initial Reading Skill (S)	2	.43	.61	.543	.02
C x S	2	.56	.80	.455	.02
Error	71	.70			
<i>Child reads/looks at magazines</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	1.27	.87	.354	.01
Pretest frequency (covariate)	1	65.09	44.81	.000	.39
Condition (C)	1	0	.01	.931	.00
Initial Reading Skill (S)	2	.28	.19	.826	.00
C x S	2	1.08	.75	.478	.02
Error	70	1.45			
<i>Child uses videogames</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	5.28	4.98	.029	.07
Pretest frequency (covariate)	1	184.55	174.43	.000	.71
Condition (C)	1	0	.00	.964	.00
Initial Reading Skill (S)	2	1.26	1.19	.311	.03

C x S	2	.93	.88	.420	.02
Error	71	1.06			
<hr/>					
<i>Child uses a computer</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.41	.22	.641	.00
Pretest frequency (covariate)	1	88.49	47.62	.000	.40
Condition (C)	1	7.63	4.11	.046	.05
Initial Reading Skill (S)	2	.20	.108	.898	.00
C x S	2	.75	.11	.671	.01
Error	70	1.86	.40		

- Teacher-Reported Frequency of Specific Classroom Behaviors

Table A2

Analysis of Covariance for Condition and Initial Reading Skill--Kindergarten

Source	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
<i>Reads/Looks at Books During Free Time</i>					
Parent s Education (covariate)	1	.94	4.69	.034	.06
Pretest frequency (covariate)	1	6.37	31.88	.000	.31
Condition (C)	1	0	.30	.587	.00
Initial Reading Skill (S)	2	.79	3.94	.024	.10
C x S	2	0	.19	.823	.01
Error	70	.20			
<i>Talks with Others About Books</i>					
Parent s Education (covariate)	1	.25	.08	.779	.00
Pretest frequency (covariate)	1	10.67	3.34	.072	.05
Condition (C)	1	1.58	.49	.484	.01
Initial Reading Skill (S)	2	1.36	.42	.655	.01
C x S	2	.87	.27	.762	.01
Error	70	3.19			
<i>Writes During Free Time</i>					
Parent s Education (covariate)	1	.47	1.91	.171	.03
Pretest frequency (covariate)	1	4.78	21.37	.000	.22
Condition (C)	1	.54	.81	.072	.04
Initial Reading Skill (S)	2	.45	.25	.362	.03
C x S	2	0	0	.888	.00
Error	70	.24	.2		
<i>Uses the Computer During Free Time</i>					
Parent s Education (covariate)	1	36.43	9.93	.002	.12
Pretest frequency (covariate)	1	341.99	93.27	.000	.57
Condition (C)	1	17.98	4.90	.030	.06
Initial Reading Skill (S)	2	1.09	.30	.745	.01
C x S	2	7.95	2.17	.122	.06
Error	70	3.67			
<i>Talks About TV Characters or Shows</i>					
Parent s Education (covariate)	1	7.97	2.05	.156	.03
Pretest frequency (covariate)	1	33.96	8.75	.004	.11
Condition (C)	1	14.40	3.71	.058	.05
Initial Reading Skill (S)	2	2.80	.72	.490	.02
C x S	2	8.91	2.29	.108	.06
Error	70	3.88			

- Specific Program Content

Table A3

Analysis of Covariance for Condition and Initial Reading Skill--Kindergarten

Source	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
<i>Speech to Print Matching</i>					
Parent s Education (covariate)	1	9.98	2.52	.117	.03
Pretest frequency (covariate)	1	57.33	14.48	.000	.17
Condition (C)	1	22.24	5.62	.021	.07
Initial Reading Skill (S)	2	5.28	1.33	.270	.04
C x S	2	1.91	.48	.619	.01
Error	70	3.96			
<i>Word Recognition</i>					
Parent s Education (covariate)	1	8251.82	155.20	.000	.69
Pretest frequency (covariate)	1	15.38	.29	.592	.00
Condition (C)	1	743.22	13.98	.000	.17
Initial Reading Skill (S)	2	71.98	1.35	.265	.04
C x S	2	53.49	1.01	.371	.03
Error	74	53.17			
<i>Word Meanings</i>					
Parent s Education (covariate)	1	72.11	6.29	.014	.08
Pretest frequency (covariate)	1	306.12	26.69	.000	.28
Condition (C)	1	2.67	.23	.631	.00
Initial Reading Skill (S)	2	10.76	.94	.396	.02
C x S	2	3.29	.29	.752	.01
Error	70	11.47			
<i>Word Building</i>					
Parent s Education (covariate)	1	29.84	2.59	.112	.04
Pretest frequency (covariate)	1	257.97	22.42	.000	.24
Condition (C)	1	28.83	2.51	.118	.03
Initial Reading Skill (S)	2	7.59	.66	.520	.02
C x S	2	11.09	.96	.387	.03
Error	70				
<i>Concepts of Print</i>					
Parent s Education (covariate)	1	94.77	2.94	.091	.04
Pretest frequency (covariate)	1	931.83	28.94	.000	.29
Condition (C)	1	445.84	13.85	.000	.16
Initial Reading Skill (S)	2	60.57	1.88	.160	.05
C x S	2	20.42	.634	.533	.02
Error	74	32.19			

- Individual Reading Skills

Table A4

Growth Curve Parameters for Letter Naming by Predictor in HLM Model--Kindergarten

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	43.50	2.64	16.45	74	.000	36%
<u>Adjustments to Intercept</u>						
Parent Education	.72	.99	.73	74	.468	
Initial Reading Ability	13.89	2.74	5.07	74	.000	
Condition	8.27	3.57	2.31	74	.021	
Rate of Growth (slope)	2.57	1.13	2.28	74	.022	3%
<u>Adjustments to Rate</u>						
Parent Education	.40	.33	1.21	74	.227	
Initial Reading Ability	-.87	1.05	-.83	74	.405	
Condition	1.71	1.38	1.24	74	.215	

Table A5

Growth Curve Parameters for Phoneme Segmentation Fluency by Predictor in HLM Model--Kindergarten

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	38.51	3.19	12.07	74	.000	14%
<u>Adjustments to Intercept</u>						
Parent Education	2.10	.89	2.35	74	.019	
Initial Reading Ability	6.56	2.69	2.44	74	.015	
Condition	7.94	3.94	2.01	74	.044	
Rate of Growth (slope)	5.56	1.22	4.54	74	.000	19%
<u>Adjustments to Rate</u>						
Parent Education	-.10	.35	.28	74	.782	
Initial Reading Ability	-2.41	1.20	-2.00	74	.045	
Condition	3.50	1.63	2.14	74	.032	

Table A6

Growth Curve Parameters for Nonsense Word Fluency by Predictor in HLM Model--Kindergarten

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	27.10	3.35	8.08	74	.000	27%
<u>Adjustments to Intercept</u>						
Parent Education	-1.22	2.82	-.43	74	.665	
Initial Reading Ability Condition	23.45	6.98	3.36	74	.001	
	14.25	6.97	2.05	74	.041	
Rate of Growth (slope)	2.74	.97	2.82	74	.005	29%
<u>Adjustments to Rate</u>						
Parent Education	-.33	.44	-.75	74	.456	
Initial Reading Ability Condition	3.06	1.24	2.46	74	.014	
	5.33	1.57	3.40	74	.001	

- Standardized Early Reading Abilities

Table A7

Analysis of Covariance for Condition and Initial Reading Skill--Kindergarten

Source	df	MS	F	Sig.	d
<i>TERA-2 Raw Score</i>					
Parent s Education (covariate)	1	10.22	.48	.489	.01
Pretest frequency (covariate)	1	802.22	37.95	.000	.35
Condition (C)	1	84.20	3.98	.050	.05
Initial Reading Skill (S)	2	58.29	2.76	.070	.07
C x S	2	10.88	.51	.600	.01
Error	70	21.14			

## FIRST GRADE RESULTS

### Outcome Measures

- Parent-Reported Frequency of Print Behaviors

Table A8

#### Analysis of Covariance for Condition and Initial Reading Skill First Grade

Source	df	MS	F	Sig.	d
<i>Looking at Books Alone</i>					
Parent s Education (covariate)	1	2.44	3.97	.050	.05
Pretest frequency (covariate)	1	53.89	87.64	.000	.56
Condition (C)	1	1.08	1.76	.190	.02
Initial Reading Skill (S)	2	.60	.98	.381	.03
C x S	2	2.79	4.54	.014	.12
Error	68	.615			
<i>Adult Reading to Child</i>					
Parent s Education (covariate)	1	2.98	3.24	.076	.03
Pretest frequency (covariate)	1	26.38	54.11	.000	.24
Condition (C)	1	0	1.25	.268	.00
Initial Reading Skill (S)	2	.23	.19	.831	.01
C x S	2	.53	.12	.890	.01
Error	68	1.21			
<i>Child Asks for Reading</i>					
Parent s Education (covariate)	1	1.62	1.07	.304	.02
Pretest frequency (covariate)	1	71.78	47.51	.000	.41
Condition (C)	1	3.11	2.06	.156	.03
Initial Reading Skill (S)	2	1.98	1.31	.276	.04
C x S	2	.46	.30	.738	.01
Error	68	1.51			
<i>Adult Suggests Child Read a Book</i>					
Parent s Education (covariate)	1	4.74	2.99	.088	.04
Pretest frequency (covariate)	1	54.94	34.67	.000	.34
Condition (C)	1	.55	.35	.559	.00
Initial Reading Skill (S)	2	2.20	1.39	.257	.04
C x S	2	2.49	1.57	.215	.04
Error	68	1.58			
<i>Child Writes Letters, Notes or Stories</i>					
Parent s Education (covariate)	1	.40	.19	.662	.00
Pretest frequency (covariate)	1	97.84	46.59	.000	.41
Condition (C)	1	.31	.15	.702	.00
Initial Reading Skill (S)	2	0	.02	.975	.00
C x S	2	2.32	1.11	.337	.02
Error	66	2.10			
<i>Child goes to Library or Bookstore</i>					
Parent s Education (covariate)	1	0	.00	.945	.00

Pretest frequency (covariate)	1	17.69	18.61	.000	.21
Condition (C)	1	.11	.12	.731	.00
Initial Reading Skill (S)	2	.0	.10	.901	.00
C x S	2	.19	.20	.815	.01
Error	68	.95			
<i>Child reads/looks at magazines</i>	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.0	.00	.975	.00
Pretest frequency (covariate)	1	85.69	55.87	.000	.46
Condition (C)	1	1.32	.86	.357	.01
Initial Reading Skill (S)	2	.24	.15	.857	.00
C x S	2	1.38	.90	.413	.03
Error	66	1.53			
<i>Child uses videogames</i>	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.0	.03	.861	.00
Pretest frequency (covariate)	1	110.39	89.48	.000	.57
Condition (C)	1	.47	.38	.540	.01
Initial Reading Skill (S)	2	1.29	1.04	.357	.03
C x S	2	.69	.56	.575	.02
Error	68	1.23			
<i>Child uses a computer</i>	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.72	.44	.51	.01
Pretest frequency (covariate)	1	85.88	53.09	.00	.44
Condition (C)	1	.55	.34	.56	.00
Initial Reading Skill (S)	2	2.06	1.27	.29	.04
C x S	2	3.53	2.18	.12	.06
Error	67	1.62			

- Teacher-Reported Frequency of Specific Classroom Behaviors

Table A9

Analysis of Covariance for Condition and Initial Reading Skill First Grade

Source	<u>df</u>	MS	F	<u>Sig.</u>	<u>d</u>
<i>Reads/Looks at Books During Free Time</i>					
Parent s Education (covariate)	1	.0	.06	.803	.06
Pretest frequency (covariate)	1	4.43	22.26	.000	.31
Condition (C)	1	.27	1.38	.244	.00
Initial Reading Skill (S)	2	.40	2.03	.138	.10
C x S	2	.14	.68	.509	.01
Error	76	.20			
<i>Talks with Others About Books</i>					
Parent s Education (covariate)	1	.36	1.21	.275	.02
Pretest frequency (covariate)	1	.13	.43	.513	.01
Condition (C)	1	.80	2.64	.108	.03
Initial Reading Skill (S)	2	2.94	9.74	.000	.20

C x S	2	.13	.43	.654	.01
Error	76	.30			
<hr/>					
<i>Writes During Free Time</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.23	.88	.352	.01
Pretest frequency (covariate)	1	5.39	20.27	.000	.21
Condition (C)	1	2.89	10.89	.001	.12
Initial Reading Skill (S)	2	1.52	5.72	.005	.13
C x S	2	.31	1.16	.318	.03
Error	76	.27			
<hr/>					
<i>Uses the Computer During Free Time</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	1.11	.27	.607	.00
Pretest frequency (covariate)	1	168.56	40.54	.000	.35
Condition (C)	1	5.12	1.23	.270	.02
Initial Reading Skill (S)	2	3.19	.77	.468	.02
C x S	2	3.74	.90	.411	.02
Error	76	4.16			
<hr/>					
<i>Talks About TV Characters or Shows</i>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>Sig.</u>	<u>d</u>
Parent s Education (covariate)	1	.51	.29	.592	.00
Pretest frequency (covariate)	1	.89	.50	.480	.01
Condition (C)	1	.10	.06	.810	.00
Initial Reading Skill (S)	2	3.95	2.24	.114	.06
C x S	2	.99	.56	.573	.01
Error	76	1.77			

- Specific Program Content

Table A10

Analysis of Covariance for Condition and Initial Reading Skill First Grade

Source	df	MS	F	Sig.	d
<i>Speech to Print Matching</i>					
Parent s Education (covariate)	1	3.83	2.84	.096	.04
Pretest frequency (covariate)	1	49.80	36.96	.000	.33
Condition (C)	1	.11	.08	.775	.00
Initial Reading Skill (S)	2	0	.03	.971	.00
C x S	2	.43	.32	.727	.01
Error	74	1.35			
<i>Word Recognition</i>					
Parent s Education (covariate)	1	1.99	.04	.839	.00
Pretest frequency (covariate)	1	11795.71	246.03	.000	.77
Condition (C)	1	8.58	.18	.674	.00
Initial Reading Skill (S)	2	22.19	.46	.631	.01
C x S	2	96.66	2.02	.140	.05
Error	74	47.94			
<i>Word Meanings</i>					
Parent s Education (covariate)	1	24.65	3.40	.069	.04
Pretest frequency (covariate)	1	352.65	48.58	.000	.40
Condition (C)	1	13.02	1.79	.185	.02
Initial Reading Skill (S)	2	34.89	4.81	.011	.11
C x S	2	20.96	2.89	.062	.07
Error	74	7.26			
<i>Word Building</i>					
Parent s Education (covariate)	1	0	.00	.986	.04
Pretest frequency (covariate)	1	103.11	24.38	.000	.24
Condition (C)	1	.51	.12	.730	.03
Initial Reading Skill (S)	2	1.66	.39	.676	.01
C x S	2	5.25	1.24	.295	.03
Error	74	4.23			
<i>Concepts of Print</i>					
Parent s Education (covariate)	1	55.24	2.16	.146	.03
Pretest frequency (covariate)	1	1329.95	52.09	.000	.41
Condition (C)	1	52.43	2.05	.156	.03
Initial Reading Skill (S)	2	41.60	1.63	.203	.04
C x S	2	63.77	2.50	.089	.06
Error	74	25.53			

- Individual Reading Skills

Table A11

Growth Curve Parameters for Letter Naming by Predictor in HLM Model First Grade

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	67.58	2.40	28.19	80	.000	27%
Adjustments to Intercept						
Parent Education	.54	.59	.92	80	.360	
Initial Reading Ability	10.94	2.26	4.85	80	.000	
Condition	-1.34	3.11	-.43	80	.667	
Rate of Growth (slope)	4.79	1.17	4.11	80	.000	8%
Adjustments to Rate						
Parent Education	-.30	.27	-1.12	80	.265	
Initial Reading Ability	.20	1.01	.20	80	.841	
Condition	.68	1.43	.48	80	.633	

Table A12

Growth Curve Parameters for Phoneme Segmentation Fluency by Predictor in HLM Model First Grade

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	51.44	1.92	26.79	80	.000	4%
Adjustments to Intercept						
Parent Education	-.02	.48	-.04	80	.968	
Initial Reading Ability	2.11	2.14	.986	80	.324	
Condition	1.67	2.85	.587	80	.557	
Rate of Growth (slope)	3.09	1.12	2.76	80	.006	36%
Adjustments to Rate						
Parent Education	.43	.25	1.69	80	.090	
Initial Reading Ability	-3.36	1.03	-3.25	80	.002	
Condition	3.50	1.59	2.20	80	.028	

Table A13

Growth Curve Parameters for Nonsense Word Fluency by Predictor in HLM Model First Grade

Fixed Effect	Coefficient	Stand. Error	T-ratio	df	Sig.	% variance explained
Mean Level (Intercept)	61.63	4.56	13.52	80	.000	38%
<u>Adjustments to Intercept</u>						
Parent Education	.65	1.19	.54	80	.587	
Initial Reading Ability	27.21	4.20	6.48	80	.000	
Condition	-2.97	5.77	-.51	80	.607	
Rate of Growth (slope)	7.65	.98	7.83	80	.000	47%
<u>Adjustments to Rate</u>						
Parent Education	.02	.38	.05	80	.958	
Initial Reading Ability	2.36	1.31	1.80	80	.072	
Condition	.36	1.63	.22	80	.824	

- Standardized Early Reading Abilities

Table A14

Analysis of Covariance for Condition and Initial Reading Skill First Grade

Source	df	MS	F	Sig.	d
<i>TERA-2 Raw Score</i>					
Parent s Education (covariate)	1	.78	.06	.806	.00
Pretest frequency (covariate)	1	249.27	19.45	.000	.21
Condition (C)	1	.12	.01	.922	.00
Initial Reading Skill (S)	2	27.91	2.18	.120	.05
C x S	2	3.59	.28	.757	.00
Error	75	12.82			

Table A15

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for 9 Parent-Reported Media Activities for Kindergarten

Media Activity	Control Group					Viewing Group				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Child Reads Books Alone	5.27	1.46	5.26	1.09	5.42	5.44	1.18	5.67	1.03	5.60
Adult Reads to Child	5.81	.51	5.75	.55	5.60	5.40	.96	5.45	1.03	5.58
Child Asks Adult to Read	5.31	1.34	5.02	1.48	5.04	5.26	1.40	5.16	1.31	5.16
Adult Suggests Child Read	5.29	1.29	5.28	1.49	5.17	4.95	1.77	5.26	1.01	5.31
Child Writes	4.71	1.74	4.38	2.07	4.54	5.02	2.00	5.42	1.72	5.31
Trips to Library/Bookstore	2.81	.92	2.58	.81	2.54	2.77	1.23	3.15	1.05	3.17
Child Reads Magazines	2.95	1.52	3.25	1.61	3.47	3.48	1.60	3.84	1.42	3.60
Child Plays Videogames	3.18	1.90	3.44	1.86	3.74	3.58	2.06	3.70	1.98	3.69
Child Uses Computers	4.08	1.81	3.83	1.86	3.74	4.09	1.82	4.37	1.79	4.42

Table A16

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Condition on 8 Parent-Reported Media Activities for First Grade

Media Activity	Control Group					Viewing Group				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Adult Reads to Child	4.86	1.15	4.89	1.23	5.04	5.27	1.10	5.15	1.30	4.99
Child Asks Adult to Read	4.32	1.68	4.08	1.51	4.16	4.71	1.53	4.63	1.67	4.46
Adult Suggests Child Read	4.84	1.54	5.00	1.59	5.12	4.97	1.40	4.93	1.52	4.86
Child Writes	4.53	1.86	4.57	2.01	4.87	5.07	1.61	5.08	1.64	4.83

Trips to Library/ Bookstore	2.49	1.14	3.11	1.09	3.18	2.78	1.12	3.44	1.03	3.35
Child Reads Magazines	3.40	1.57	3.78	1.59	3.76	3.41	1.83	3.46	1.67	3.49
Child Plays Videogames	3.81	1.57	3.68	1.71	4.04	3.51	1.98	4.23	1.78	3.87
Child Uses Computers	3.37	1.83	3.82	1.47	3.73	4.20	1.87	3.88	1.82	3.87

Table A17

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Condition by Initial Reading Ability on Reading Books Alone for First Grade

<b>Control Group</b>	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
Media Activity	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Child Reads Books Alone	4.64	1.29	5.18	.75	5.78	5.50	1.42	4.94	1.73	4.92

<b>Viewing Group</b>	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
Media Activity	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Child Reads Books Alone	5.87	1.13	5.93	.83	5.58	5.11	.96	5.65	.79	5.90

Reading Above Grade Level				
Pretest		Posttest		
<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
6.37	.92	6.25	1.03	5.66

Reading Above Grade Level				
Pretest		Posttest		
<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
5.75	1.28	5.75	1.39	5.63

Table A18

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for 5 Teacher-Reported Classroom Behaviors for Kindergarten

Media Activity	Control Group					Viewing Group				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Reads/Free Time	2.37	.59	2.32	.52	2.25	2.00	.74	2.09	.66	2.19
Talks About Books	2.16	.49	2.08	.36	1.96	1.97	.45	1.46	2.45	1.64
Writes/Free Time	1.95	.69	2.27	.51	2.22	1.73	.74	1.95	.67	1.99
Computer/Free Time	2.42	.55	2.49	.51	1.28	1.81	.47	1.15	4.41	.14
Talks About TV	2.28	.73	2.38	.55	2.45	2.13	.72	1.34	3.01	1.49

Table A19

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Condition on 4 Teacher-Reported Classroom Behaviors for First Grade

Media Activity	Control Group					Viewing Group				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Talks About Books	2.05	.50	1.92	.66	1.91	1.90	.49	2.07	.54	2.12
Writes/Free Time	1.85	.70	1.67	.70	1.69	1.91	.74	2.13	.63	2.09
Computer/Free Time	2.70	.52	2.67	.48	1.77	2.10	.61	.44	3.53	1.19
Talks About TV	1.97	.53	1.74	1.82	1.63	1.36	.63	1.64	.68	1.55

Table A20

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Initial Reading Ability on Reading During Free Time for First Grade (as Rated by Teacher)

Media Activity	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Reads/Free Time	2.00	.47	2.11	.51	2.33	2.54	.50	2.51	.56	2.46

Reading Above Grade Level				
Pretest		Posttest		
<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
2.88	.33	2.87	.34	2.63

Table A21

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Condition on 5 Program Specific Outcomes for Kindergarten

Program Specific Content	Control Group				
	Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Speech to Print Match	6.84	2.30	6.73	2.53	6.33
Word Recognition	18.44	16.09	20.03	15.40	17.39
Word Meaning	4.13	3.12	6.57	3.88	6.65
Word Building	7.74	4.20			9.43
Concepts of Print	13.63	7.49	16.22	7.74	15.27

Program Specific Content	Viewing Group				
	Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Speech to Print Match	6.178	3.04	7.17	2.48	7.52
Word Recognition	12.77	16.69	21.70	20.76	24.17
Word Meaning	5.73	4.66	7.20	5.24	7.09

Word Building	7.63	4.58			10.84
Concepts of Print	22.80	7.61	19.29	10.72	20.64

**Note:** Possible range for Speech to Print Matching is 0-10, actual range for Speech to Print Matching was 0-10. Possible range for Word Recognition is 0-73, actual range for Word Recognition was 1-63. Possible range for Word Meaning is 0-12, actual range for Word Meaning was 0-12. Possible range for Word Building is 0-15, actual range for Word Building was 1-15. Possible range for Concepts of Print is 0-32, actual range for Concepts of Print was 1-32.

Table A22

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for 3 Program Specific Outcomes for First Grade

Program Specific Content	Control Group					Viewing Group				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Speech to Print Matching	8.87	1.1.66	9.38	1.11	9.37	8.81	1.62	9.28	1.72	9.29
Word Building	12.62	3.09			13.47	12.19	2.70			13.63
Concepts of Print	23.38	7.66	26.36	7.43	26.20	22.77	7.77	27.51	6.69	27.90

**Note:** Possible range for Speech to Print Matching is 0-10, actual range for Speech to Print Matching was 0-10. Possible range for Word Building is 0-15, actual range for Word Building was 1-15. Possible range of Concepts of Print is 0-32, actual range for Concepts of Print was 1-32.

Table A23

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Initial Reading Ability on Word Meanings for First Grade

Program Specific Content	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>

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Word	6.04	3.87	6.85	3.98	7.69	6.63	3.17	8.50	3.36	8.81
------	------	------	------	------	------	------	------	------	------	------

Meanings

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Reading Above Grade Level				
Pretest		Posttest		
<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
9.94	4.01	12.47	3.16	10.51

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**Note:** Possible range for Word Meaning is 0-20, actual range for Word Meaning was 0-20.

Table A24

Pretest and Post-test Means and Standard Deviations, and Adjusted Posttest Means for Effects of Condition by Initial Reading Ability on Word Recognition for First Grade

<b>Control Group</b>	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
Program Specific Content	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Word Recognition	27.50	12.04	37.17	16.29	47.18	36.47	15.31	40.10	15.10	41.64

<b>Control Group</b>	Reading Above Grade Level				
Program Specific Content	Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Word Recognition	63.86	8.65	7.38	41.73	

<b>Viewing Group</b>	Reading Below Grade Level					Reading At Grade Level				
	Pretest		Posttest			Pretest		Posttest		
Program Specific Content	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Word Recognition	24.40	16.65	30.60	17.74	43.58	36.10	14.74	44.42	15.41	46.29

<b>Viewing Group</b>	Reading Above Grade Level				
Program Specific Content	Pretest		Posttest		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Adj. M</u>
Word Recognition	62.55	5.90	69.67	<u>2.64</u>	

**Note:** Possible range for Word Recognition is 0-73, actual range for Word recognition was 1-63.

## APPENDIX B: INTERVIEWS AND QUESTIONNAIRES

### Child Reading and TV Interview Child Program Specific Interview Child Program & Character Appeal Interview Parent and Child Information Sheet Parent Questionnaire Kindergarten Teacher Questionnaire First Grade Teacher Questionnaire Teacher Post-Viewing Questionnaire

#### Child Reading and TV Interview

Show the child the **smiley face** answer card and say: I AM GOING TO ASK YOU SOME QUESTIONS ABOUT WATCHING TV, READING BOOKS, AND USING COMPUTERS. LOOK AT THESE FIVE FACES. SOME OF THE FACES ARE HAPPY AND SOME ARE NOT HAPPY. I WANT YOU TO POINT TO THE FACE THAT SHOWS HOW YOU FEEL. IF YOU REALLY LIKE SOMETHING, YOU WOULD POINT TO THIS FACE (point to the happiest face); IF YOU REALLY DON T LIKE SOMETHING, YOU WOULD POINT TO THIS FACE (point to the saddest face); IF YOU DON T HAVE ANY FEELING ABOUT IT OR YOU DON T CARE ABOUT IT, YOU WOULD POINT TO THIS FACE (point to the middle face).

LET S TRY ONE ABOUT SPORTS: HOW MUCH DO YOU LIKE PLAYING SOCCER?

IF YOU REALLY LIKE PLAYING SOCCER A LOT, WHICH ONE WOULD YOU POINT TO? (child should point to the happiest face; if not, correct the child by pointing to the correct face and saying THIS ONE MEANS YOU REALLY LIKE PLAYING SOCCER).

IF YOU DON T LIKE PLAYING SOCCER AT ALL, WHICH ONE WOULD YOU POINT TO? (child should point to saddest face; if not, correct the child by pointing to the correct face and saying THIS ONE MEANS YOU DON T LIKE PLAYING SOCCER AT ALL ).

WHAT IF YOU DIDN T HAVE ANY FEELINGS ABOUT SOCCER, ONE WAY OR THE OTHER? WHICH ONE WOULD YOU POINT TO? (child should point to middle face; if not, correct the child by pointing to the correct face and saying THIS ONE MEANS YOU DON T HAVE ANY FEELINGS ABOUT SOCCER ).

1. HOW MUCH DO YOU LIKE WATCHING TV? 1 2 3 4 5
2. HOW MUCH DO YOU LIKE READING BOOKS? 1 2 3 4 5
3. HOW MUCH DO YOU LIKE USING A COMPUTER? 1 2 3 4 5
4. HOW MUCH DO YOU LIKE LOOKING AT BOOKS ON YOUR OWN? 1 2 3 4 5
5. HOW MUCH DO YOU LIKE HAVING SOMEONE READ TO YOU? 1 2 3 4 5
6. HOW GOOD ARE YOU AT FIGURING OUT NEW WORDS WHEN YOU READ? 1 2 3 4 5
7. WHEN YOU WATCH TV, HOW GOOD ARE YOU AT LEARNING SOMETHING NEW? 1 2 3 4 5
8. WHEN YOU READ A BOOK, HOW GOOD ARE YOU AT LEARNING SOMETHING NEW? 1 2 3 4 5
9. WHEN YOU USE A COMPUTER, HOW GOOD ARE YOU AT LEARNING SOMETHING NEW? 1 2 3 4 5
10. YOU THINK THAT LEARNING HOW TO READ IS HOW IMPORTANT? 1 2 3 4 5
11. YOU THINK THAT LEARNING HOW TO WRITE IS HOW IMPORTANT? 1 2 3 4 5

NOW I WANT TO ASK YOU SOME OTHER QUESTIONS ABOUT READING BOOKS.

1. WHY DO YOU NEED TO LEARN HOW TO READ?
2. WHY DO YOU NEED TO LEARN HOW TO WRITE?
3. WHAT ARE YOUR FAVORITE TV SHOWS?

4. WHAT ARE YOUR FAVORITE BOOKS?

**Protocol for Program Specific Measures**

**Directions:** Examiners read the capitalized words, using appropriate lists. All items are worth one point, except for the word definitions (which will be scored later and are worth 2 points) and item 7B which can be worth up to 18 points depending on how many words the child can read. Follow the order of subtests and encourage child with statements like "You're doing a good job. You're working hard on this. Keep going. It's okay if you don't know all the answers (or you can't read all the words). We just want to see which things are easy and which things are hard."

**1. Sight Words:** HERE IS A LIST OF WORDS. PLEASE READ THEM TO ME ACROSS THE PAGE (point to illustrate) THE BEST THAT YOU CAN. YOU MAY NOT KNOW ALL THE WORDS, AND THAT'S OKAY. JUST DO THE BEST THAT YOU CAN. (hand child the probe SW).

- |            |             |              |               |
|------------|-------------|--------------|---------------|
| ___ 1. the | ___ 6. in   | ___ 11. who  | ___ 16. can't |
| ___ 2. of  | ___ 7. is   | ___ 12. very | ___ 17. much  |
| ___ 3. and | ___ 8. you  | ___ 13. look | ___ 18. not   |
| ___ 4. a   | ___ 9. that | ___ 14. see  | ___ 19. what  |
| ___ 5. to  | ___ 10. it  | ___ 15. here | ___ 20. yes   |
- \_\_\_\_\_ /20 TOTAL (PSSW1)

**2. Word Identification:** HERE ARE MORE WORDS YOU MAY OR MAY NOT KNOW. GO ACROSS THE LIST AND READ THE WORDS YOU CAN. IF YOU DO NOT KNOW A WORD, TELL ME AND SKIP IT AND GO ON TO THE NEXT.

- |            |             |              |                |
|------------|-------------|--------------|----------------|
| ___ 1. pop | ___ 6. box  | ___ 11. fish | ___ 16. back   |
| ___ 2. ram | ___ 7. man  | ___ 12. rock | ___ 17. drop   |
| ___ 3. hug | ___ 8. run  | ___ 13. duck | ___ 18. fuzzy  |
| ___ 4. cap | ___ 9. big  | ___ 14. king | ___ 19. trick  |
| ___ 5. ten | ___ 10. red | ___ 15. west | ___ 20. pepper |
- \_\_\_\_\_ /20 TOTAL (PSWI3)

**3. Speech to Print Matching:** PLEASE LISTEN CLOSELY TO THE WORD I SAY, AND THEN POINT TO IT ON THE CARD.

- |             |              |             |               |
|-------------|--------------|-------------|---------------|
| ___ 1. HEN  | ___ 4. MAN   | ___ 7. BUG  | ___ 10. BLACK |
| ___ 2. DUCK | ___ 5. TRICK | ___ 8. PET  |               |
| ___ 3. POT  | ___ 6. CHOP  | ___ 9. PINE |               |
- \_\_\_\_\_ /10 TOTAL (PSSP2)

**4. Long words:** HERE ARE SOME MORE WORDS FOR YOU TO READ. AGAIN, YOU MAY NOT BE ABLE TO READ ALL THE WORDS, AND THAT'S OKAY. I WANT TO SEE WHICH WORDS ARE EASY AND WHICH WORDS ARE HARD FOR KIDS YOUR AGE TO READ. DO THE BEST YOU CAN. IF YOU CAN'T FIGURE OUT A WORD IT'S OK TO SKIP IT AND TRY THE NEXT ONE. (Hand child probe allow student time to try figuring out each word.) If student is silent for 3 seconds, say SKIP THAT WORD AND TRY THE NEXT ONE. Discontinue after 4 consecutive misses.

- |                   |                     |                     |
|-------------------|---------------------|---------------------|
| ___ 1. butterfly  | ___ 6. restaurant   | ___ 11. abracadabra |
| ___ 2. unzipped   | ___ 7. unbuttoned   | ___ 12. intelligent |
| ___ 3. helicopter | ___ 8. thunderclap  |                     |
| ___ 4. unpacked   | ___ 9. fiddlesticks |                     |
| ___ 5. hamburger  | ___ 10. squished    |                     |
- \_\_\_\_\_ /12 TOTAL (PSLW4)

**5. Word Meanings:** NOW WE'RE GOING TO DO SOMETHING A LITTLE DIFFERENT. THIS TIME, I'M GOING TO TELL YOU A WORD, AND I WANT YOU TO TELL ME WHAT YOU THINK THE WORD MEANS. FOR EXAMPLE, IF I SAID APPLE YOU WOULD SAY IT'S A KIND OF FOOD WE EAT, OR IT'S A ROUND, RED FRUIT. DO YOU UNDERSTAND? OK, LET'S BEGIN: Examiner may probe once by asking, ANYTHING ELSE? (Examiner: Please try to write the student's response here.)

1. HEN	6. CUB
2. JIG	7. ANTLERS
3. OX	8. CLAM
4. YAM	9. HUMONGOUS
5. RAM	10. SURVIVAL MANUAL

\_\_\_\_\_ /20 TOTAL (PSWM5)

6. **Word Building:** Arrange letters according to card in packet. TAKE A LOOK AT THESE LETTERS. THEY STAND FOR PARTS OF WORDS THAT YOU PROBABLY KNOW. FIRST, I WANT TO SEE IF YOU KNOW SOME OF THESE WORD PARTS.

CAN YOU SEE LETTERS HERE THAT SAY /S/? POINT TO A LETTER THAT STANDS FOR /S/. (Examiner makes /sssss/ sound.) \_\_\_\_\_

CAN YOU SEE THE LETTERS THAT SAY /CH/? POINT TO /ch/.\_\_\_\_\_

POINT TO THE LETTER THAT SAYS /O/? (Pronounce as ah, with rounded mouth.) \_\_\_\_\_

POINT TO THE LETTER THAT SAYS /I/. (Pronounce as ih.) \_\_\_\_\_

POINT TO THE LETTER THAT SAYS /U/. (Pronounce as uh.) \_\_\_\_\_

NOW WE RE GOING TO USE SOME OF THESE WORD PARTS TOGETHER. IF I WANTED TO SPELL SIT, I WOULD USE THIS LETTER AND THEN THESE LETTERS. (Examiner puts s on green square and says /SSSS/ and then IT on blue square and says /it/.) SEE?

NOW YOU TRY. SPELL HIT BY PUTTING THE LETTERS ON THESE SPACES. THE GREEN CARDS GO ON THE GREEN SPACE, THE BLUE CARDS GO ON THE BLUE SPACE, AND THE YELLOW CARDS GO ON THE YELLOW SPACE. \_\_\_\_\_

NOW TRY HOP. \_\_\_\_\_

CHOP \_\_\_\_\_

SUN \_\_\_\_\_

BUN \_\_\_\_\_ (AS IN A HAMBURGER BUN)

Discontinue here if score so far is less than 7.

SHOW ME HOW YOU WOULD SPELL SITS ?\_\_\_\_\_ (AS IN THE DOG SITS BY THE DOOR.)

CHOPS \_\_\_\_\_ ( SHE CHOPS UP CARROTS INTO SMALL PIECES.)

HITS \_\_\_\_\_ (HE SOMETIMES HITS HOMERUNS.)

BUNCH \_\_\_\_\_ (I ATE A WHOLE BUNCH OF GRAPES.)

HITCH \_\_\_\_\_ (HOOK UP THE TRAILER TO THE HITCH.)

Score 1 point for each word correctly spelled.

\_\_\_\_\_/15 TOTAL (PSWB6)

7. **Chicken Jane/Concepts of Print:** (Show child screen grab with text, and ask the following questions).

A. SHOW ME WHERE TO BEGIN READING. \_\_\_\_\_

B. CAN YOU READ ANY OF THIS YOURSELF? READ WHATEVER YOU CAN READ ON THIS PAGE. (If child reads all of the words, write 18 in the blank, score question C and D with a 1, and skip to question E. If child reads words here and there, count the number of words child could read, and write that number in the blank. If child cannot read, score zero, and go to next item. \_\_\_\_\_)

C. Read the first line of the text aloud and stop. WHERE DO I GO NOW? \_\_\_\_\_

D. WOULD YOU PLEASE POINT TO THE WORDS AS I READ THEM. (Continue reading, somewhat slowly but with normal rhythm. If student s word-by-word finger-pointing matches your reading, score 1. \_\_\_\_\_)

E. At end of the page, say POINT TO THE FIRST WORD ON THIS PAGE. \_\_\_\_\_

F. POINT TO THE LAST WORD ON THIS PAGE. \_\_\_\_\_

G. CAN YOU FIND TWO WORDS THAT ARE THE SAME? \_\_\_\_\_

H. CAN YOU FIND THE WORD GOING ? \_\_\_\_\_

I. CAN YOU FIND THE WORD DOT ? \_\_\_\_\_

J. CAN YOU FIND THE WORD JANE ? \_\_\_\_\_

K. CAN YOU POINT TO A WORD THAT RHYMES WITH JANE ? \_\_\_\_\_

L. WHAT IS THE WORD THAT RHYMES WITH JANE ? \_\_\_\_\_

M. CAN YOU FIND A WORD THAT BEGINS WITH /s/? \_\_\_\_\_

(Be sure to say the sound and not the letter.)

N. CAN YOU FIND A WORD THAT ENDS WITH /k/? \_\_\_\_\_

(Be sure to say the sound and not the letter.)

O. CAN YOU POINT TO AN EXCLAMATION POINT?\_\_\_\_\_

P. WHAT DOES IT MEAN WHEN YOU SEE ONE OF THESE?\_\_\_\_\_

\_\_\_\_\_/33 TOTAL (PSCJ7)

8. **Word Identification/First Grade:** HERE IS ANOTHER LIST OF WORDS THAT YOU MAY OR MAY NOT KNOW. GO ACROSS THE LIST AND READ THE WORDS YOU CAN. IF YOU DO NOT KNOW A WORD, TELL ME AND SKIP IT AND GO ON TO THE NEXT. (give child 3 seconds per word and then say TRY THE NEXT ONE).

- |                |                   |                  |                  |
|----------------|-------------------|------------------|------------------|
| ___ 1. rocket  | ___ 6. sloppy     | ___ 11. copper   | ___ 16. shocking |
| ___ 2. antlers | ___ 7. scam       | ___ 12. chapter  | ___ 17. tackle   |
| ___ 3. mutton  | ___ 8. juggle     | ___ 13. stump    | ___ 18. drummer  |
| ___ 4. chicken | ___ 9. pickled    | ___ 14. squiggle | ___ 19. criminal |
| ___ 5. tents   | ___ 10. undressed | ___ 15. slender  | ___ 20. Dentist  |
|                |                   |                  | ___ 21. tropical |

Program appeal

Show the child the **smiley face** answer card and say: I AM GOING TO ASK YOU SOME QUESTIONS ABOUT DIFFERENT CHARACTERS AND SEGMENTS FROM THE BETWEEN THE LIONS PROGRAM YOU WATCHED. LOOK AT THESE FIVE FACES. SOME OF THE FACES ARE HAPPY AND SOME ARE NOT HAPPY. I WANT YOU TO POINT TO THE FACE THAT SHOWS HOW YOU FEEL. IF YOU REALLY LIKE SOMETHING, YOU WOULD POINT TO THIS FACE (point to the happiest face); IF YOU REALLY DON T LIKE SOMETHING, YOU WOULD POINT TO THIS FACE (point to the saddest face); IF YOU LIKE SOMETHING A LITTLE YOU WOULD POINT TO THIS FACE(point to the #4 face); IF YOU DON T LIKE SOMETHING A LITTLE BIT YOU WOULD POINT TO THIS FACE(point to the #2 face);IF YOU DON T HAVE ANY FEELING ABOUT IT OR YOU DON T CARE ABOUT IT, YOU WOULD POINT TO THIS FACE (point to the middle face).

LET S TRY ONE: WHO IS THIS CHARACTER (show the sample Arthur picture)?

HOW MUCH DO YOU LIKE HIM?

IF YOU REALLY LIKE ARTHUR A LOT, WHICH ONE WOULD YOU POINT TO? (child should point to the happiest face; if not, correct the child by pointing to the correct face and saying THIS ONE MEANS YOU REALLY LIKE ARTHUR).

WHAT IF YOU DIDN T HAVE ANY FEELINGS ABOUT ARTHUR, ONE WAY OR THE OTHER? WHICH ONE WOULD YOU POINT TO? (child should point to the middle face; if not, correct the child by pointing to the correct face and saying THIS ONE MEANS YOU DON T HAVE ANY FEELINGS ABOUT ARTHUR )

IF YOU LIKE ARTHUR A LITTLE WHICH ONE WOULD YOU POINT TO? (child should point to the #4 face; if not, correct the child by pointing to the #4 face and saying THIS ONE MENAS YOU LIKE ARTHUR A LITTLE ).

IF YOU REALLY DON T LIKE ARTHUR AT ALL WHICH ONE WOULD YOU POINT TO? (child should point to the saddest face; if not, correct the child by pointing to the saddest face and saying THIS ONE MEANS YOU DON T LIKE ARTHUR AT ALL ).

IF YOU DON T LIKE ARTHUR A LITTLE WHICH ONE WOULD YOU POINT TO? (child should point to the #2 face; if not, correct the child by pointing to the #2 face and saying THIS ONE MEANS YOU DON T LIKE ARTHUR A LITTLE ).

CHARACTERS

12. WHO IS THIS CHARACTER?
13. HOW MUCH DO YOU LIKE CLEO? 1 2 3 4 5
14. WHY OR WHY NOT?
15. WHO IS THIS CHARACTER?
16. HOW MUCH DO YOU LIKE CLIFF HANGER? 1 2 3 4 5
17. WHY OR WHY NOT?
18. WHO IS THIS CHARACTER?
19. HOW MUCH DO YOU LIKE THE GREAT SMARTINI? 1 2 3 4 5
20. WHY OR WHY NOT?
21. WHO IS THIS CHARACTER?
22. HOW MUCH DO YOU LIKE LIONEL? 1 2 3 4 5
23. WHY OR WHY NOT?
24. WHO IS THIS CHARACTER?
25. HOW MUCH DO YOU LIKE THEO? 1 2 3 4 5
26. WHY OR WHY NOT?
27. WHO IS THIS CHARACTER?
28. HOW MUCH DO YOU LIKE SAM SPUD? 1 2 3 4 5
29. WHY OR WHY NOT?

30. WHO IS THIS CHARACTER?
31. HOW MUCH DO YOU LIKE Dr. RUTH? 1 2 3 4 5
32. WHY OR WHY NOT?
33. WHO ARE THESE CHARACTERS?
34. HOW MUCH DO YOU LIKE THE VOWELLES? 1 2 3 4 5
35. WHY OR WHY NOT?
36. WHO IS THIS CHARACTER?
37. HOW MUCH DO YOU LIKE FRED? 1 2 3 4 5
38. WHY OR WHY NOT?
39. WHO IS THIS CHARACTER?
40. HOW MUCH DO YOU LIKE LEONA? 1 2 3 4 5
41. WHY OR WHY NOT?
42. WHO IS THIS CHARACTER?
43. HOW MUCH DO YOU LIKE GAWAIN? 1 2 3 4 5
44. WHY OR WHY NOT?
45. WHO IS THIS CHARACTER?
46. HOW MUCH DO YOU LIKE BUSTERFIELD? 1 2 3 4 5
47. WHY OR WHY NOT?
48. WHO ARE THESE CHARACTERS?
49. HOW MUCH DO YOU LIKE WALTER AND CLAY PIGEON? 1 2 3 4 5
50. WHY OR WHY NOT?
51. WHO ARE THESE CHARACTERS?
52. HOW MUCH DO YOU LIKE CHICKEN JANE? 1 2 3 4 5
53. WHY OR WHY NOT?
54. WHO IS THIS CHARACTER?
55. HOW MUCH DO YOU LIKE CLICK? 1 2 3 4 5
56. WHY OR WHY NOT?
57. IF YOU COULD INVITE ANY OF THESE CHARACTERS TO YOUR BIRTHDAY PARTY, WHICH ONE(S) WOULD YOU INVITE? WHY?
58. WHICH ONE OF THESE CHARACTERS WOULD YOU WANT TO TALK TO IF YOU WERE FEELING SAD? WHY?
59. IF YOU COULD PICK ONE TO READ YOU A STORY, WHO WOULD IT BE? WHY?

PRINT ON SCREEN

60. HOW MUCH DO YOU LIKE THE LETTERS AND WORDS ON THE TV? 1 2 3 4 5
61. DID YOU TRY TO READ ALONG yes/no
62. DID YOU LEARN TO READ ANY NEW WORDS FROM THE WORDS ON THE SCREEN yes/no
63. CAN YOU REMEMBER ANY NEW WORDS YOU LEARNED? (list the words)
64. HOW MUCH DID YOU LIKE THE PROGRAM? 1 2 3 4 5
65. HOW MUCH WOULD YOU LIKE TO WATCH THIS PROGRAM AT HOME? 1 2 3 4 5
66. DO YOU HAVE ANY FAVORITE STORIES OR PARTS OF THE PROGRAM? (list them)
67. IS THERE ANYTHING ABOUT THE PROGRAM YOU DID NOT LIKE?

68. WHAT IS YOUR FAVORITE TV SHOW?

HOW DOES BETWEEN THE LIONS COMPARE TO THIS SHOW? DO YOU LIKE BTL MORE LESS  
SAME WHY?

**Parent and Child Information Sheet**

Date Completed: \_\_\_/\_\_\_/\_\_\_ Child's Birthdate: \_\_\_/\_\_\_/\_\_\_

Child's Name: \_\_\_\_\_ Sex: M or F

Child's Birth Order: \_\_\_\_\_ 1<sup>st</sup> \_\_\_\_\_ 2<sup>nd</sup> \_\_\_\_\_ Other (specify)

Name of parent completing information: \_\_\_\_\_

What is the main language spoken in your home? \_\_\_\_\_

How would you describe your child?

- 5 Native American, Eskimo, or Aleut
- 5 Asian or Pacific Islander
- 5 Black or African-American (not of Hispanic Origin)
- 5 White or European-American (not of Hispanic Origin)
- 5 Hispanic
- 5 Other: \_\_\_\_\_ (please describe)

How would you describe yourself and your partner?

<b>You</b>	<b>Your Partner</b>
5 Male 5 Female	5 Male 5 Female 5 I do not have a partner
5 Native American, Eskimo, or Aleut 5 Asian or Pacific Islander 5 Black or African-American (not of Hispanic Origin) 5 White or European-American (not of Hispanic Origin) 5 Hispanic 5 Other: _____ (please describe)	5 Native American, Eskimo, or Aleut 5 Asian or Pacific Islander 5 Black or African-American (not of Hispanic Origin) 5 White or European-American (not of Hispanic Origin) 5 Hispanic 5 Other: _____ (please describe)
Birthdate: ___/___/___	Birthdate: ___/___/___
Years of Education: _____ <u>Diplomas/Degrees (check all that apply):</u> 5 High school/GED 5 2yr degree/trade school 5 4 yr degree 5 graduate/professional	Years of Education: _____ <u>Diplomas/Degrees (check all that apply):</u> 5 High school/GED 5 2yr degree/trade school 5 4 yr degree 5 graduate/professional
Total Family Income please place a check next to your total <b>yearly</b> family income:	
5 \$0 to \$9,999	5 \$25,000 to \$29,999
5 \$10,000 to \$16,499	5 \$30,000 to \$44,999
5 \$16,500 to \$19,999	5 \$45,000 or above
5 \$20,000 to \$24,999	

**Pre-test Parent Questionnaire**

Please fill out the following questions about your family and your child's reading and television use and return it in the envelope provided to your child's teacher.

Child s Name: \_\_\_\_\_ Date Completed: \_\_\_/\_\_\_/\_\_\_

Parent s Name: \_\_\_\_\_

---

1. Does your family get a newspaper regularly?  
5 YES  
5 NO
2. Does your family get magazines regularly?  
5 YES  
5 NO
3. Are there more than 25 books in your home?  
5 YES  
5 NO
4. Is there a dictionary in your home?  
5 YES  
5 NO
5. Do you have a computer in the home?  
5 YES  
5 NO
6. Do you have cable TV?  
5 YES  
5 NO

#### Reading and Books

1. Does your child know the alphabet?  
5 KNOWS ALL THE LETTERS  
5 KNOWS SOME OR MOST OF THE LETTERS, BUT NOT ALL  
5 DOESN T KNOW OR KNOWS JUST A FEW OF THE LETTERS
2. Does your child know what sounds the letters make?  
5 KNOWS ALL THE SOUNDS  
5 KNOWS SOME OR MOST OF THE SOUNDS, BUT NOT ALL  
5 DOESN T KNOW OR KNOWS JUST A FEW OF THE SOUNDS
3. Can your child read?  
5 MY CHILD READS BOOKS  
5 MY CHILD READS SIMPLE SENTENCES  
5 MY CHILD READS SOME WORDS  
5 MY CHILD IS NOT READING YET
4. Is your child able to read story books on his/her own?  
5 YES  
5 NO
5. About how many children s books does your child have of his/her own?  
5 NONE  
5 1 OR 5 BOOKS  
5 6 TO 10 BOOKS  
5 11 TO 25 BOOKS  
5 MORE THAN 25 BOOKS  
5 DON T KNOW/NOT SURE
6. How much do you think your child likes being read to?  
5 A LOT  
5 A LITTLE  
5 NOT AT ALL
7. How much do you think your child likes reading or looking at books on his/her own?  
5 A LOT  
5 A LITTLE  
5 NOT AT ALL
8. What are your child s favorite books? Please list.

-----  
 -----  
 -----

Television

Here are some questions about your child s television viewing. We want you to include television shows and video tapes, but not games like Nintendo or Sega.

9. How much time would you say your child spends watching TV or video tapes on a typical **weekday** (Monday to Friday)?

\_\_\_\_\_ hours per day on a weekday

10. How much time would you say your child spends watching TV or video tapes on a typical day on the **weekend** (Saturday or Sunday)?

\_\_\_\_\_ hours per day on the weekend

11. What are your child s favorite TV programs? Please list.

-----  
 -----  
 -----

Print Use

These questions ask about how often **your child** participates in different kinds of print activities at home (do not include activities at school). Please place a check in the box to indicate **how often**.

How often	Never	Once a month or less	2 or 3 times a month	About once a week	3 or 4 times a week	About once a day	Several times a day
Does your child look at books alone?							
Do you or someone else read to your child?							
Does your child ask to be read to?							
Do you suggest that your child read or look at a book?							
Does your child write letters, notes, or stories?							
Does your child go to the library or bookstore?							
Read or look at magazines?							
Use videogames?							
Use Computers?							

**THANK YOU! PLEASE RETURN THIS FORM TO YOUR CHILD S TEACHER IN THE ENVELOPE PROVIDED.**

**Post-test Parent Questionnaire**

**Please fill out the following questions about your family and your child s reading and writing activities. You may remember some of these questions from the first questionnaire while other questions are new. Please return this form in the envelope provided to your child s teacher.**

Child s Name: \_\_\_\_\_ Date Completed: \_\_/\_\_/\_\_

Parent s Name: \_\_\_\_\_

7. Have you noticed any change in your child's reading ability/habits during the last several weeks?  
 5 NO  
 5 YES

If yes, please describe: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

8. Has your child mentioned a television program at school called *Between the Lions*?  
 5 NO  
 5 YES

If yes, please describe what your child has said:  
 \_\_\_\_\_

9. Does your child have an identified disability that affects his/her academics?  
 5 NO  
 5 YES

10. Does your child have an IEP (individualized educational plan)?  
 5 NO  
 5 YES

Print Use

These questions ask about how often **your child** participates in different kinds of print activities at home (do not include activities at school). Please place a check in the box to indicate **how often**.

How often	Never	Once a month or less	2 or 3 times a month	About once a week	3 or 4 times a week	About once a day	Several times a day
Does your child look at books alone?							
Do you or someone else read to your child?							
Does your child ask to be read to?							
Do you suggest that your child read or look at a book?							
Does your child write letters, notes, or stories?							
Does your child go to the library or bookstore?							
Read or look at magazines?							
Use videogames?							
Use Computers?							

THANK YOU! PLEASE RETURN THIS FORM TO YOUR CHILD'S TEACHER IN THE ENVELOPE PROVIDED.

**Kindergarten Teacher Questionnaire**

**Name of student:** \_\_\_\_\_

**School:** \_\_\_\_\_

**Name of Teacher:** \_\_\_\_\_

---

1. This child's pre-reading and early reading skills are:

- \_\_\_\_\_ above grade level
- \_\_\_\_\_ at grade level
- \_\_\_\_\_ below grade level

2. In pre-reading and early reading tasks, this child has had/is having:

- \_\_\_\_\_ no difficulty
- \_\_\_\_\_ a little difficulty
- \_\_\_\_\_ a lot of difficulty

3. Please check the frequency that this child engages in the following behaviors at school:

<u>BEHAVIORS</u>	Never	Sometimes	Often	Not Applicable	Don't Know
Reads or looks at books during free time					
Writes during free time					
Talks with others about books					
Uses the computer during free time					
Talks about TV characters or shows					

First Grade Teacher Questionnaire

Name of student: \_\_\_\_\_

School: \_\_\_\_\_

Name of Teacher: \_\_\_\_\_

---

4. This child's reading skills are:

- \_\_\_\_\_ above grade level
- \_\_\_\_\_ at grade level
- \_\_\_\_\_ below grade level

5. In learning to read, this child has had/is having:

- \_\_\_\_\_ no difficulty
- \_\_\_\_\_ a little difficulty
- \_\_\_\_\_ a lot of difficulty

6. Please check the frequency that this child engages in the following behaviors at school:

<u>BEHAVIORS</u>	<b>Never</b>	<b>Sometimes</b>	<b>Often</b>	<b>Not Applicable</b>	<b>Don't Know</b>
<b>Reads or looks at books during free time</b>					
<b>Writes during free time</b>					
<b>Talks with others about books</b>					
<b>Uses the computer during free time</b>					
<b>Talks about TV characters or shows</b>					

*BETWEEN THE LIONS*

Post-Viewing Questionnaire For Teachers

Your Name: \_\_\_\_\_

Grade: \_\_\_\_\_

not at all   somewhat   a lot

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. How interested were your students in watching these shows?                                    | 1 | 2 | 3 | 4 | 5 |
| 2. To what extent do you think this series shows the value of reading?                           | 1 | 2 | 3 | 4 | 5 |
| 3. To what extent do you think this series shows the value of writing?                           | 1 | 2 | 3 | 4 | 5 |
| 4. To what extent do you think this series boosted your students' interest in reading?           | 1 | 2 | 3 | 4 | 5 |
| 5. To what extent do you think this series boosted your students' interest in writing?           | 1 | 2 | 3 | 4 | 5 |
| 6. To what extent did viewing the shows help improve your students' early literacy skills?       | 1 | 2 | 3 | 4 | 5 |
| 7. To what extent do you think your students would want to read the books featured in the shows? | 1 | 2 | 3 | 4 | 5 |
| 8. To what extent does this series support or complement your classroom literacy program?        | 1 | 2 | 3 | 4 | 5 |
| 9. How interested are you in using this series in the classroom in the future?                   | 1 | 2 | 3 | 4 | 5 |

10. Which were your students' favorite episodes (circle all that apply)?

- |                        |                      |
|------------------------|----------------------|
| 1. Shooting Stars      | 10. Lionel's Antlers |
| 2. Big Little Mouse    | 11. Peck of Peppers  |
| 3. Hopping Hen         | 12. Chaps with Caps  |
| 4. Magic               | 13. Popcorn          |
| 5. Fuzzy Wuzzy         | 14. To the Ship      |
| 6. Pandora's Box       | 15. Hug, Hug, Hug    |
| 7. Queen Moon          | 16. Lost Rock        |
| 8. Pecos Bill          | 17. Cry Wolf         |
| 9. Farmer Ken's Puzzle |                      |

Which were your students' favorite puppet characters (circle all that apply)?

Theo (father)                      Cleo (mother)      Lionel (cub)    Leona (cub)  
Click the Mouse    Busterfield                      pigeons

Which were your students' favorite recurring (parts) segments (circle all that apply)?

Cliffhanger                      What's Cooking?    Chicken Jane      Arty Smartypants  
Dr. Ruth                      Vowelles              Fred (white haired man who does  
word sounds)  
Gawain's Word              Sam Spud

How did your students feel about the repetition of parts from one program to another?

Were there features of the program that your students didn't like?  
If so, please specify.

Did your students refer to the stories, characters, or segments during other activities or situations?  
Examples:

What features of the program did you especially like?

Were there features of the program that you didn't like?  
If so, please specify.

Are there any particular episodes or segments (parts) you would want to use for classroom instruction?  
Which one(s)?

What materials would you want us to supply to extend the teaching and learning experience?

storybooks                       scripts                                       activity sheets  
 teacher's guide               computer software                       Web site  
 songs (CD or tape)               recommendations for related trade books  
 materials for parents

Other comments:

## APPENDIX C: EPISODE VIEWING ORDER

### *Between the Lions* Episode Viewing Order

1. Shooting Stars
2. Big Little Mouse

3. Hopping Hen
4. Magic
5. Fuzzy Wuzzy
6. Pandora s Box
7. Queen Moon
8. Pecos Bill
9. Farmer Ken s Puzzle
10. Lionel s Antlers
11. Peck of Peppers
12. Chops with Caps
13. Popcorn
14. To the Ship
15. Hug, Hug, Hug
16. Lost Rock
17. Cry Wolf

# Summative Evaluation of *Between the Lions*:

A Supplement to the Final Report

Deborah L. Linebarger, Ph.D.

Juniper Gardens Children's Project

University of Kansas

Kansas City, Kansas 66101

July 21, 2000

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### ***SECTION 1***

#### **AT RISK ANALYSES**

A subset of analyses were performed to evaluate gains in performance based on at risk classifications. For these analyses, at-risk for reading problems was defined in three different ways:

1. Disability/ESL status: Children were identified as at-risk if they had an identified disability or spoke English as a Second Language.
2. School risk status: These analyses were performed based on an at-risk assignment by school. Attending a school where the overall level of risk is high and the overall level of achievement is low can place all students in that school at risk. We examined differences across three schools. All would be considered at risk in the general population; however, one school in particular was at most risk when compared to the others.
3. Family status: Children were identified as at-risk if they had certain family characteristics. These characteristics included incomes below \$30,000 and parent s education below 14 years (high school and some training after high school).

#### Analytical Approach

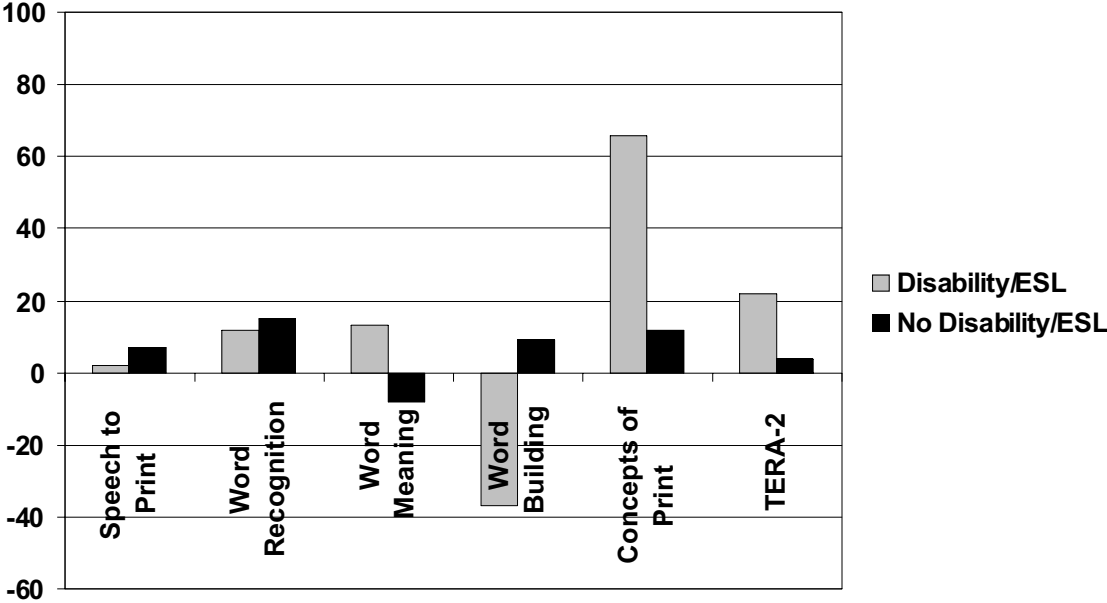
Sample sizes associated with each of the at-risk groups described above were small; therefore, simple difference scores from pre-test to post-test were calculated and then graphed to visually represent average percent gains from the pre-test to the post-test for the at-risk and non-at-risk groups *who viewed the program*. Average percent gain by the corresponding control group was subtracted from the average percent gain of the viewing group in order to observe the true difference between the at-risk and non-at-risk groups. Again, these analyses are based on small sample sizes and are meant to

provide information about trends associated with risk status. Replication with large and more diverse samples is necessary for any definitive conclusions.

**AT-RISK ANALYSES ASSOCIATED WITH DISABILITY/ESL STATUS**

- 17 children (out of 164) had an identified disability ( $n = 13$ ) or ESL ( $n = 4$ ) in the total sample; 12 children in the viewing group
- 8 children in kindergarten and 4 children in first grade in the viewing group

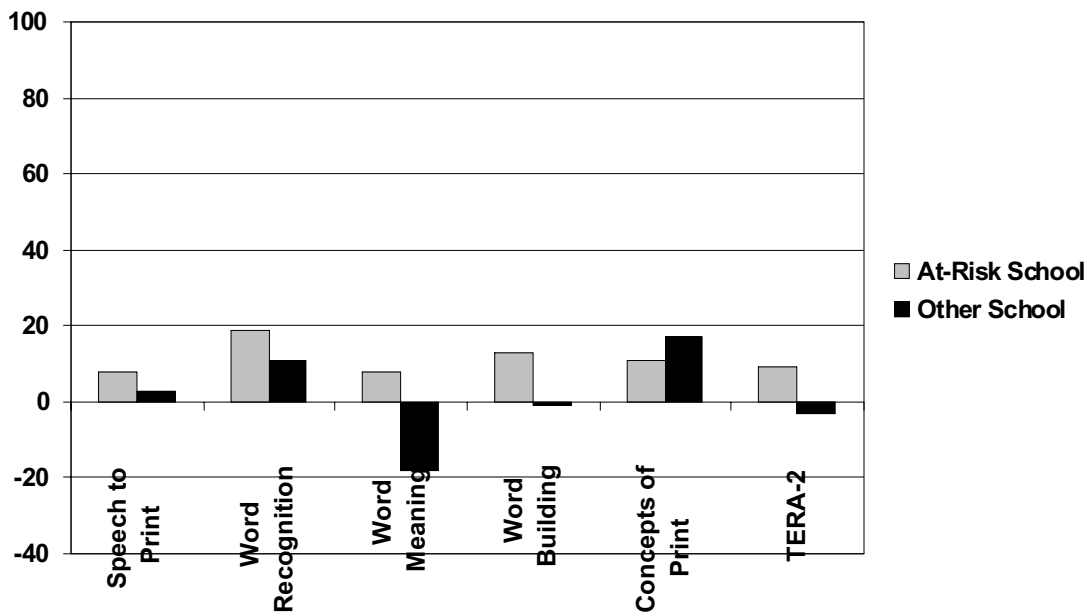
**Disability/ESL Status for Those Who Viewed BTL:  
Average Percent Gain from Pre-test to Post-test**



**AT-RISK ANALYSES ASSOCIATED WITH SCHOOL RISK STATUS**

- 32 children (out of 164) attended the most at-risk school in the viewing group
- 16 children in kindergarten and 16 children in first grade

## School Status for Those Who Viewed BTL: Average Percent Gain from Pre-test to Post-test



### AT-RISK ANALYSES ASSOCIATED WITH FAMILY STATUS

- 56 children (out of 164) had family incomes below \$30,000 and parent education levels equal to some training post-high school or lower across the control and viewing groups; 28 children were in the viewing group
- 11 children in kindergarten and 17 children in first grade in the viewing group

SECTION 2

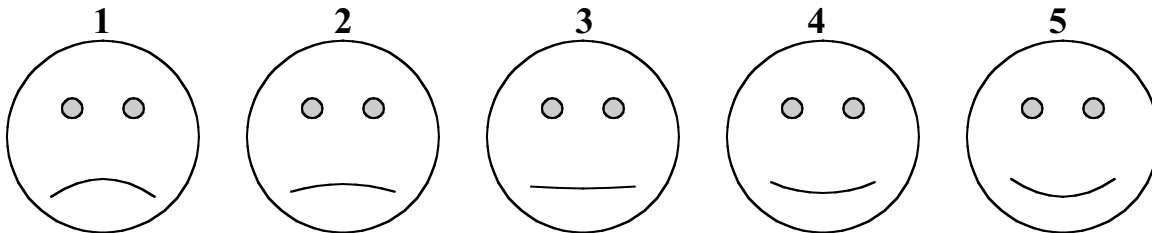
**CHILD COMMENTS ABOUT *BETWEEN THE LIONS***

Prepared by

**Rhett Larsen**

**Program Appeal: The extent to which students liked or disliked each of the characters and segments of the program and examples of reasons why.**

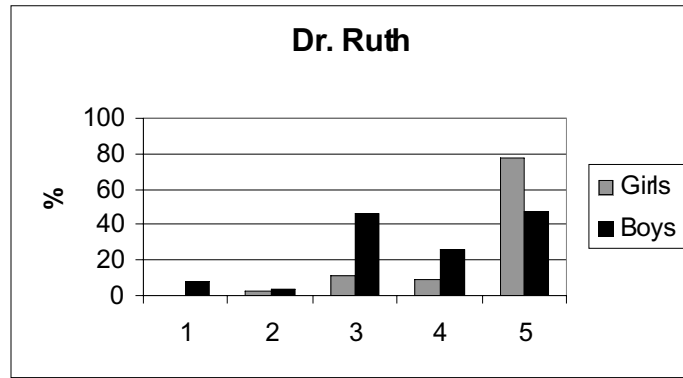
Students were shown a stimulus picture (see appendix XXX) of each of the characters and segments of the program and were asked how much did you like this character/segment. The students were instructed to answer by pointing to one of the following five faces that represents how they feel about the specific character/segment.



Students were further instructed that each of the faces were interpreted in the following way:

- 1= they *disliked* the character or segment *a lot*.
- 2= they *disliked* the character or segment *a little*.
- 3= they had *no feelings* about the character or segment one way or the other.
- 4= they *liked* the character or segment *a little*.
- 5= they *liked* the character or segment *a lot*.

Percent of students responses for each character /segment on the five-point scale are presented on the following graphs along with examples of common responses given when asked *why* they *liked* or *disliked* each character or segment of the program. Data are presented first for those characters/segments where responses differed significantly across gender followed by all the characters/segments.



**Reasons why Girls liked Dr. Ruth:**

She s a Doctor. She talks to monkeys. She helps people. She likes to read. She helps you learn how to read. She s smart. She says, I m good . I just do. She is nice to every person. She helps the words when they freak out. She helps kids with words. She turned sad into glad. She s very funny. She would help the letters change. She made the words happy. She makes me learn those long words. She teaches us. She always told the monkeys to sound it out. I like her shows. The words talked to her. Words sit on her chair. She helps a lot of people. She makes people happy. She helps people sound out words.

**Reasons why Boys liked Dr. Ruth:**

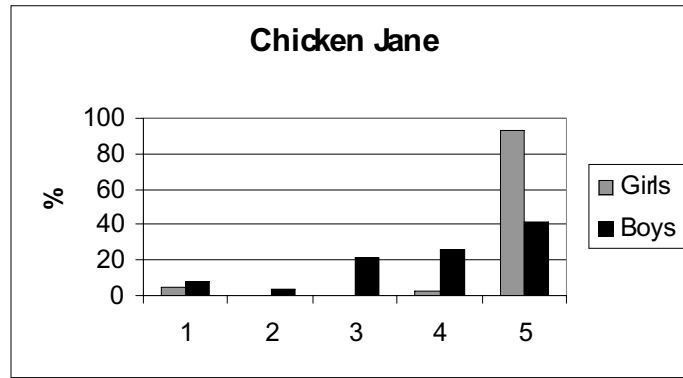
She helps people. The monkeys were funny. It s funny when the words walked out. The letters say sounds. She says hello at the begging and good bye at the end. She made people feel better. She rearranges the letters to make new words. She helps with big long words. She helps the monkeys. She makes people happy. She helps people to read. She always helps the words that need help. I liked how they did the words. The monkey breaks her door. She tells people that they can read it. She was always helping people. She makes people feel better. The letters say sounds. It s funny when she says, it must be a word freak out . She is very funny.

**Reasons why Girls disliked Dr. Ruth:**

She does not do very much except talk to words. She s kind of funny but not that much.

**Reasons why boys disliked Dr. Ruth:**

I don t like it when she fixes letters. All she does is sit at her desk. I think she is crazy. It is so boring. Not so interesting. Not that funny. She is kind of funny but I don t care about her.



**Reasons why Girls liked Chicken Jane:**

It is funny when she walks. She is funny. I like it when they sing. She is silly. She spells out words. She saves the kids. She always gets hurt and the kids don't. They do a little song at the end and then talk. The chicken is very funny. She always has a broken arm at the end of the story. I like it because they squish Chicken Jane. They always went down the lane. Whenever they finish the poem she clucks. They say thank you Chicken Jane. Jane helps them get away from something bad. A big flying duck made Chicken Jane muddy. They run away and Chicken Jane has to stay there. They like to sing. Chicken Jane fell in the mud. The ox got on her. They walk fast. It is funny when she (CJ) walks. They are fun to sing with. I like to eat chicken. They always took walks. I like the girl and the boy; they were nice to Chicken Jane. She stays with the people. She gets hurt instead of Dot or Scott. She spelled duck and she didn't duck.

**Reasons why Boys liked Chicken Jane:**

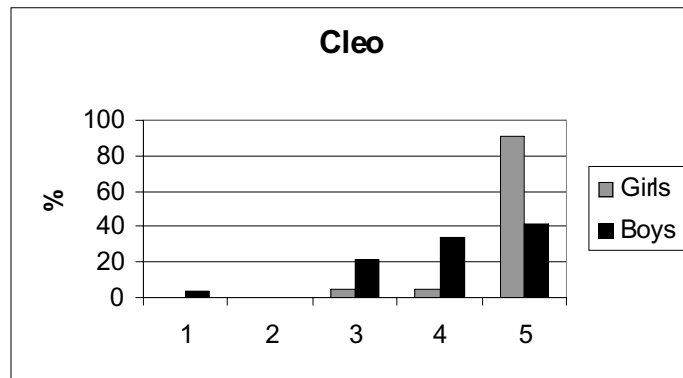
The chicken was funny. She always talks in chicken-like language. She always gets hurt. It is so funny. I liked when the chicken broke her arm. At the end of the song they say chicken and she comes flying out. The chicken is silly. *He* likes words. I like her chicken language. She spells out words like stop. She gets everything bad. She always gets smashed. It always spells words.

**Reasons why Girls disliked Chicken Jane:**

I don't like the songs they sing. They're not funny.

**Reasons why Boys disliked Chicken Jane:**

They acted like babies. She always got hurt. They were not that funny. Not do much. Chicken Jane can't do anything right. I just don't like it that much.



**Reasons why Girls liked Cleo:**

She has a pretty necklace. She was funny. She helps us learn stuff. She is pretty. She was nice. She s my favorite. I like it when she sings. She s a mommy. I just liked it. She s a girl. She is really nice to her kids. She goes into the books and she talks about things. She helps kids to learn. She lets them do fun things. I like the way she talks. I like her voice when she sings. She finds books that other people can understand. Sometimes she is silly. She always helped the dad. She has earrings. She always sneaked up on the daddy lion. She has lots of necklaces. She helped the children. Because of the way she uses the pointer to smash against the board. She is my favorite.

**Reasons why Boys liked Cleo:**

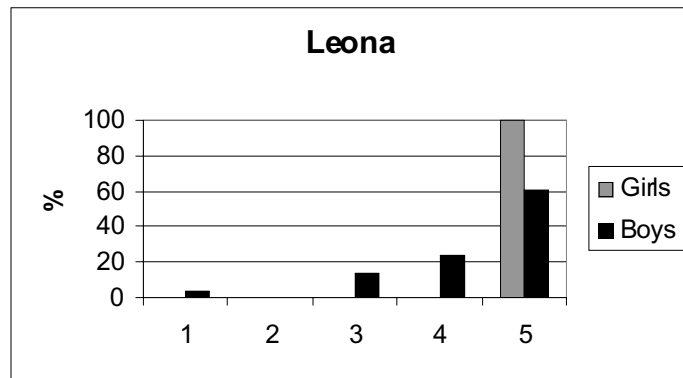
She s funny. She reads stories. It is a funny show she s in it. I like watching her on the movie. She helps people a lot. She makes people feel better. She sang songs. She always went into the book. She sneaks up on the dad lion. She reads books to learn. She s OK. I like her. She jumps into books. She is fuzzy and nice.

**Reasons why Girls disliked Cleo:**

She has ugly eyes. She wasn t in it that much. She s not very good. *He* is not very good on TV. Her face is a little bit too frisky

**Reasons why Boys disliked Cleo:**

She was boring. We didn t get to see her very much. She s not that funny. I don t like the movie at all, I get bored and I already know all the words. . I didn t get to see her often. It s sort of boring watching it. She does not have a lot of parts. I don t like girls very much.



**Reasons why Girls liked Leona:**

She s funny. She does fun stuff. Because I am a funny girl too. She was a baby. She had a loud voice. She had yellow eyes. She s cute. She wore a pretty necklace like her mom. She s little and she is funny. She guessed herself across the game. She is like my sister and me. She says hi to her brother. She knows how to have fun with other people. She s got that thing on her tail. She reads books. She helps that one guy on TV. It was funny when she jumped on her brother. She liked all different kinds of books. She s fun to sing with. She s funny when she talks. She has a ponytail on her tail. Her mom read books to her. She always got silly. She s nice to everyone. I just like her. She always asks her brother to read to her. She reads books. She likes fuzzy wuzzy stuff. It was funny when she acted like a monkey. She helped one guy in the book. She was always talking to her brother. She had a loud voice. I love her so much because she s a girl. She s a baby cub. She can play by herself or with friends. Every time her brother gets it wrong she gets it right. She thinks everything is real.

**Reasons why Boys liked Leona:**

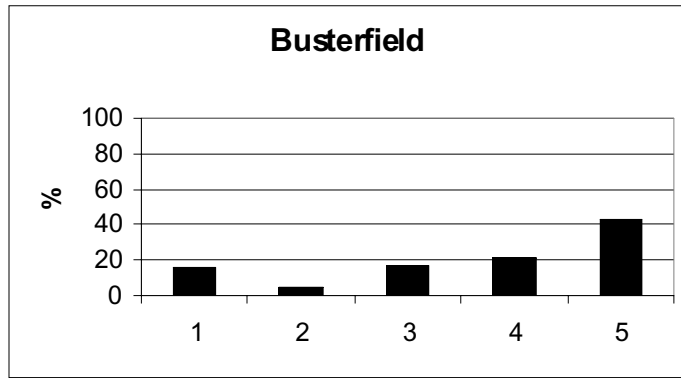
She s funny. I like her voice. She bonks her brother on the head a lot. She s silly. She talked funny. She helps her brother. She plays games with her brother. She always asks her brother to read her stories. She wins from her brother. She pretended she was a farmer. She is funny when she acts like a monkey. I like her voice. She is always wishing to do stuff. She s kind of funny. She likes to play with her brother. She sneaks up on her brother. She always screams. She tries to read by herself by sounding out words. She plays a lot.

**Reasons why Girls disliked Leona:**

*No girl gave Leona less than five on the five-point scale.*

**Reasons why Boys disliked Leona:**

I just don t care about her. She always needs help doing things she already knows how to do. She was a baby. She is annoying. She wasn t that funny. She s just weird. She s a girl. She gets her brother tongue twisted.

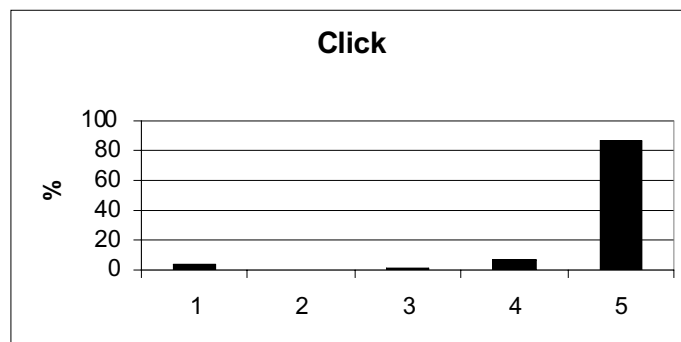


**Reasons why students liked Busterfield:**

He says funny things. Every time he sleeps his nose wiggles. He s a talking statue. He is really silly. He is funny. He says there is something wrong with him. He doesn t think the rock is dumb. He tells people what to do. He s been crazy to the birds. He says pigeons . He stays really still. He looks like a turkey. The little birds bother him. He bosses the chicken around. He doesn t like to be called Buster . The Birds hugged him. He always gets everything bad. He didn t have hands. When he moves his nose it s funny. I like how he wiggles his nose sideways and up and down. He is made of stone but he talks. He puts on a wig. He is nice. He has a heart of fuzz. He likes to talk. He talked funny. He gets mad at the birds. Every time he sleeps his nose wiggles. It s funny when he wears the wig and takes pictures. It s funny when his wig goes over his eyes. The birds are his helpers. *She* always says, Get off of me . He always gets the best of it. He was the boss of the two.

**Reasons why students disliked Busterfield:**

He is really grumpy. He is mean. He is not very funny. He s strange. He does weird things. He is a statue and just stays there. He s just OK. He s not that fun to watch. He hardly ever shows up on the TV. He doesn t like kids. He s kind of mean. He didn t do funny things. He just stays in the same place. He doesn t like the *parrots* putting on wigs. He doesn t like the stuff that the pigeons do. He is just crazy; he wiggles his nose without his hands. He tells the pigeons what to do. He s a statue. His wig fell off. He does not do as much as the other guys. He stays in his warm place. He was rude to the two little birds.



**Reasons why students liked Click:**

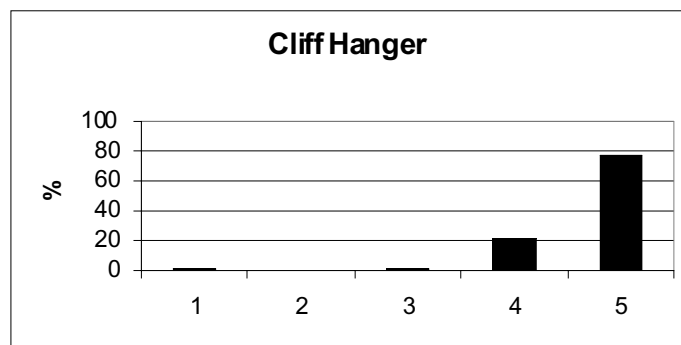
She made things come out of books. She is so nice. She was a robot mouse. She s funny. She s cute. She is really fast. She is a computer mouse. She likes to help people. She makes reading fun. I like how she does the computer thing with her ears. She makes Cleo go into the book. He s cute. He is alive. He does a lot. He likes to help people. She did magic things. She can do anything. She is a robot. He clicks stuff out of books. She was a mouse and helped us do the computer. I wish I could have her so I could take cool things out of books and movies. She has batteries. I never heard a talking mouse. She was really nice and helped them. She takes animation out of stuff. Gets stuff out of books for kids. He does a lot of stuff that is good that I like. He says funny things. He is really really smart. I like his whiskers and his ears. He goes very fast. He is so computerized. She could transform people from the story to the library. He can roll. The popcorn lands on Click s mouth.

**Reasons why students disliked Click:**

She was not that funny. She does the impossible. He s not really a mouse. She s OK.

**Researcher note:**

Students using pronouns in their responses were more likely to identify Click as their same gender, as is evidenced by **14 boys** referring to Click as **He** compared to **11 boys** referring to Click as **She**. Similarly, **20 girls** referred to Click as **She** while **17 girls** referred to Click as **He**.



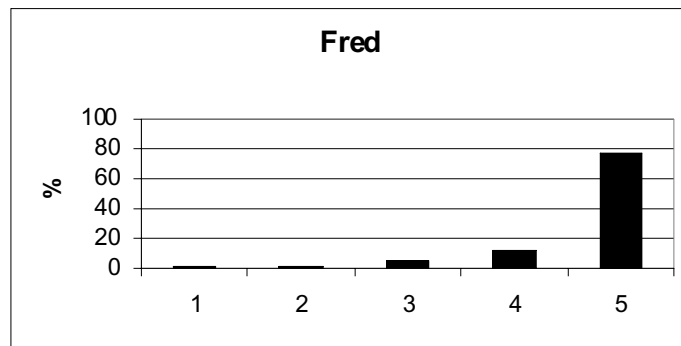
**Reasons why students liked Cliff Hanger:**

He is funny. He never gets off the cliff. He hangs from cliffs. He always says, Can t hold on much longer . I like how he hangs. He is silly. They sing. He has stuff so he can get a banana suit. The big monkey gets him. He hangs on a branch. He s so funny. He always goes into his backpack. He feeds the big monkey a banana. He always gets stuff out of his backpack. He is

cool. He dresses up. He just dreams. He always yells when he falls. He has a backpack. He couldn't get down or up. I really like him. I like him because he is on a cliff. He is always acting goofy. He always hangs up in the branches. He is silly. He wears that suit and jumps back up. I like him the best; I want to grow up like him. He hangs on a tree. He jumped in the monkey. I like his shows. Every time he tries to do something to get off the cliff he always ends up back hanging on the branch. He's got *some bible menu*. He always tries to get off the cliff. He hangs every day.

**Reasons why students disliked Cliff Hanger:**

I don't like him falling. He's not that funny. All he does is hang from a cliff and nothing else. Not so much action.

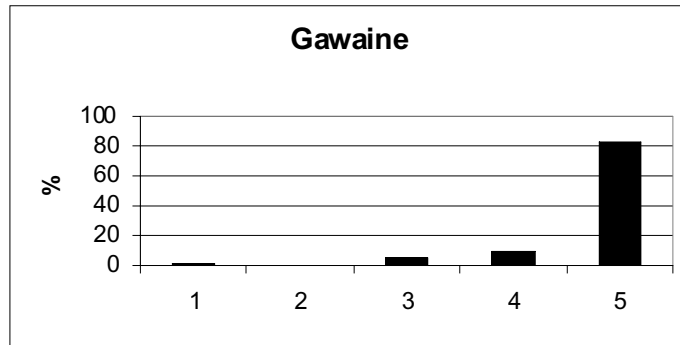


**Reasons why students liked Fred:**

He was very, very funny. He spelled words. He says funny words. He sounds out the letters. He tickles himself. He acts the words out. He puts words together and tries to read them. He spells rock, flies, and shark then he runs. He makes good noises. In the first part he doesn't know we're there. I like his sounds. He sounds out words first then he says it. He smells. Sometimes he dresses up and turns into something else. He helps people spell words. He always does funny words. He always played with the letters. He's like a sidekick guy. He doesn't say actual words just sounds. I like his words. He's silly with the words he says. He likes to help spell. He always made the thing that he said. He sings funny. He's funny when he tickles himself and runs all over the place. He likes to take numbers. He can make funny sounds like my dad. He makes letters into words. He can make all different sounds.

**Reasons why students disliked Fred:**

He's crazy. He acts weird. He's only a little funny. He is not silly. He doesn't do that many funny things. He is not funny. He is kind of funny but I don't like him. He's sort of funny. He's weird. I don't care about him.

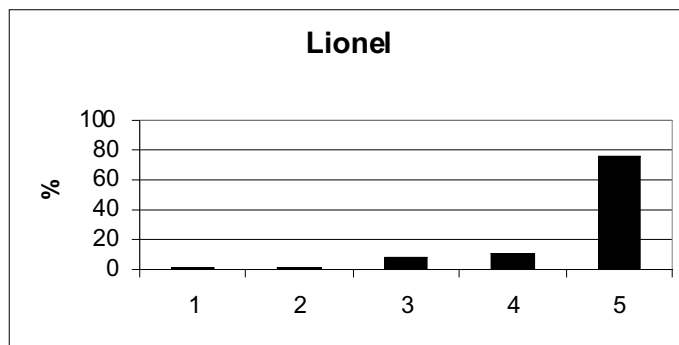


**Reasons why students liked Gawain's Word:**

It was funny. He is so nice. He is cool. He is a knight. He runs into people. He has a cool sign. They jump together. They put words together. He is so nice. They charge together. He pours water on his face. He would crash into people. He has cool words. He's a knight. He spells words. I like his trumpet. I don't know why I do but I really like him. He smashes his fists together. The last part they do a jig and it's really funny. They act out the word. They have armor. He said funny things. When they crash together it is funny. He's got metal stuff on. He makes great words I like. They poured water on each other. When they spell words they hug. They said funny words. He has funny episodes. They taught us to make sounds and have fun. They sound out some words. He is silly. Great words come out of his mouth. He makes words that are funny. He makes funny noises.

**Reasons why students disliked Gawain's Word:**

He's OK. All they do is put sounds together. It is Boring. He's not that funny. They are kind of funny.



**Reasons why students liked Lionel:**

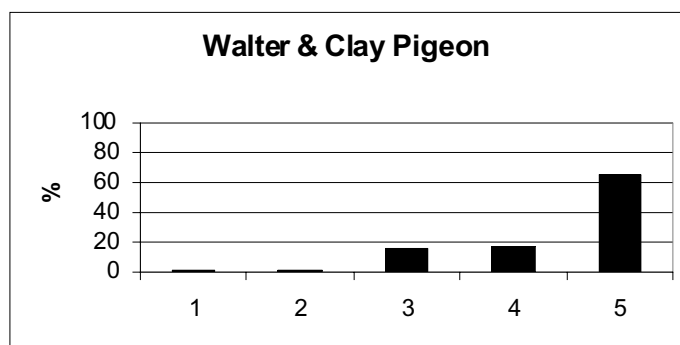
He was funny. He helped his sister. He read stories. He is a good reader. He likes magic. He thinks up fun ideas. He reads funny stories. He has a tail. He got his tongue twisted. He can read really fast. He didn't like fuzzy wuzzy. He reads to his sister. He had antlers on. He reads a lot. He found books his sister could read. He likes Cliff Hanger. He is sometimes nice. He wears funny things. He knows how to read and he helps me to read. He tries to help out his family. He

is kind of like my sister. He does fun stuff. He s cool. He likes to read lots of books that I like too. He grew horns on his head. It was funny when he tried to do a magic trick and got stuck in the closet. He s kind of smart. I like his striped shirts. I like his sense of *humorness*. He always picks Cliff Hanger books. He played with his sister. He reads cool books.

**Reasons why students disliked Lionel:**

He was mean to his little sister. He is always acting up. He looks like a girl. He does not care about his sister. He is not funny. He does not like the baby book. He wasn t very smart. He s not kind of funny. He is not very good; he does not do very much. He is playing too much. He is weird his sister got everything right and he couldn t.

**Researcher note:** When ratings were broken out by gender, almost identical patterns across boys and girls were noted.

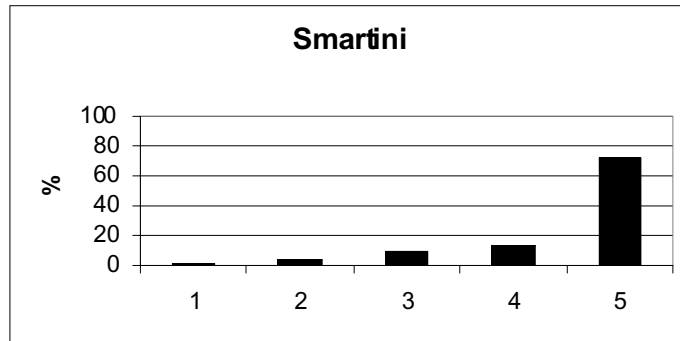


**Reasons why students liked Walter and Clay Pigeon:**

They are funny. They eat popcorn all the time. They are nice. I liked their sounds. They looked pretty. I like it when they forget the word they are supposed to say. I like it when they eat popcorn and get really big. They couldn t remember stuff. They re silly. They like parrots. They are so cute. They got really fat. They are funny because pigeons are not supposed to wear clothes and they do. They talked funny. I liked it when they hugged. They like popcorn and so do I. They talk a lot and play a lot. Whenever the boy made mistakes the girl corrected him. They are crazy to Busterfield. They like to pop popcorn. They re cute. They always win against the stone guy. They are nice. They make things up in their head. When they ate all the popcorn and got so fat they had to roll on their bellies. I like the vest and her hat. They are always enjoying themselves. They always went to do things with Busterfield. They make fun of Busterfield.

**Reasons why students disliked Walter and Clay pigeon:**

They don t really do anything. They are not that funny. They are always freaking me out. They re not really supposed to talk. They made mistakes. All they do is turn their heads. They are not nice; the girl one is really, really mean. All they do is eat popcorn. They are weird.

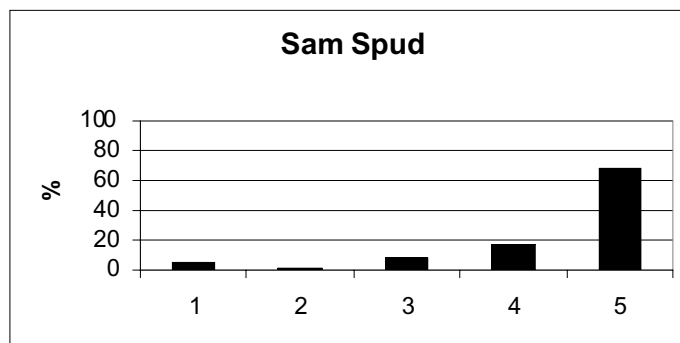


**Reasons why students liked Arty Smartypants:**

He is very funny. He does magic tricks. He pulls things out of his pants. He can poke his eyeball in and out. He does funny things. It's funny when he does his dance. His pants are big. He shakes his pants. He falls a lot. He says funny words. His pants fell down. He took words out of his pants. He is silly. I like his dance and music. Really funny. He has a funny name. Popcorn comes out of his drawers. I loved it. He's funny when he falls and does the splits. He's kind of cool. He sings about his pants. He had a swirly eye. I like the smarty arty dance. He's really goofy.

**Reasons why students disliked Arty Smartypants:**

He was too silly. He put things in his pants. He is weird. He does not do much just points to words. I don't like him because popcorn pops out of his underwear. I'm bored with him. I don't like it when he puts words in his pants. He does the same tricks. I don't like the pockets that much. I don't care about him. I never like him. He's like a puppet.

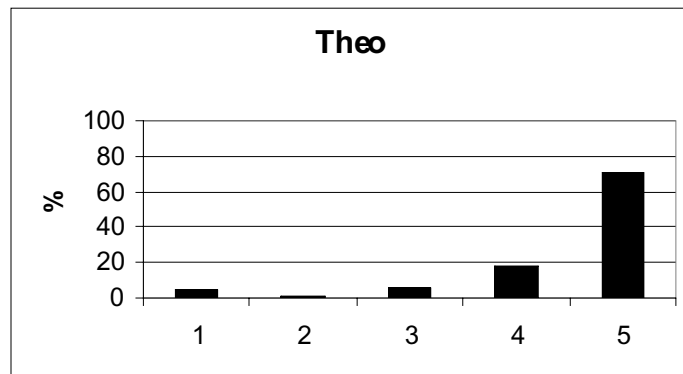


**Reasons why students liked Sam Spud:**

He had a potato head. He was funny. I liked his stories. It was funny when he messed up the words. I liked the sign on his window. It s the funniest part I ve seen. He solves mysteries. He has funny people come in. He types stuff. When he talks he does funny stuff. He has pieces of food. He knows how to spell. He always got hurt. He was a reporter and didn t spell things right. He s a detective. He always repeats his name every time he is a boiled potato. He always messes up words. I like how every time there is a problem with his part of the show. He s funny when he got knocked out. I like his hat. There are a lot of people who visit him. He s sort of funny. He s weird. The egg exploded. It is the funniest part I have seen. I like the hot sauce pouring on his calculator. Every time he messed up the words he changed the letter. He spells things wrong. He lives in the refrigerator. He says something wrong then fixes it. He doesn t have hair, face or eyes. I like his jokes. His desk falls over. He helps people. The flicker bothers him. It was funny when the beans spilled on him. He talks weird. He had all kinds of visitors every time. Some of his stories are funny. There is a blinking sign on his window. He likes to read a lot. . He is a detective and I like to be a detective around my house.

**Reasons why students disliked Sam Spud:**

He is boring. He doesn t do much. He talks with no mouth. I don t care about him. He does not type good. He does not do that much funny stuff. I don t like it when he says pickle. He s not that funny. Sometimes he gets the word wrong.



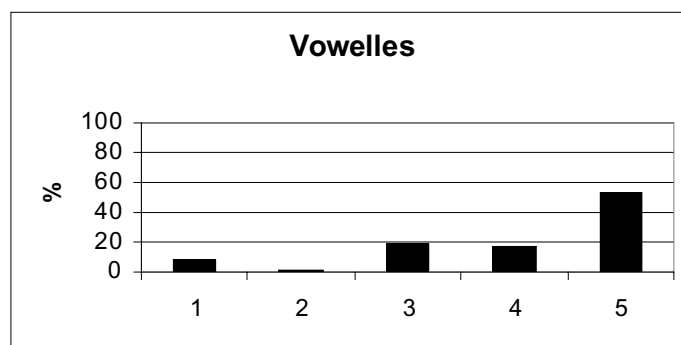
**Reasons why students like Theo:**

He was funny. I like how he does his hair. He sleeps all the time. He is silly and crazy. He goes to sleep with his glasses on. He is cool. He likes to sleep. He couldn t stay awake. He helps people. He reads stories to his kids. He likes to eat a lot. He s tired. He stays out of books. He does the cooking show. He is always pretending to be awake. He has glasses on. He says ten hours . He is funny and he is my favorite character. He and his girl cook together. He s got long lion hair. He eats raw meat. I like the way he acts on the cooking show. He is really nice. He has a lot of hair on his face. When he falls down sometimes he says, yea . He is kind of cool. He always comes up with ideas. I like it when he goes to sleep with his glasses on. He said that whenever he reads a book it makes him hungry. It was funny when he splattered all the cans on

the fridge. He always reads. One time he had his hair straight up. He always sniffs things. He always tried to make things right. He started eating without cooking. He eats everything. He s big.

**Reasons why students disliked Theo:**

He s not that funny. He s weird. He s always hungry. All he does is sleep. I just don t care about him. He is sort of funny and sort of angry. The food wouldn t cook. He makes the children go to bed. He doesn t do very many things.



**Reasons why students liked the Vowelles:**

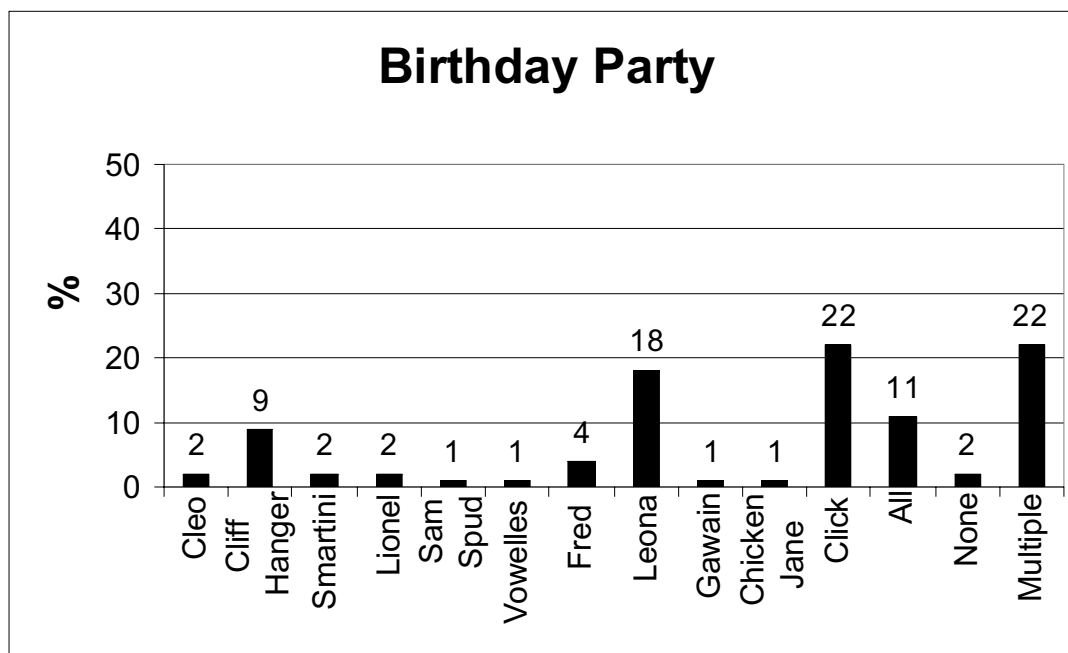
They were funny. I liked their music. They always sing. I like how they sing. When they sing they are funny. They dance all the time. They make words at the bottom. They make sounds. They sing pretty. They sing letter sounds. They are different colors. They are gloves and mouths but not really people. Sometimes they have scarves. They point out the letters. I like their colors. They are kind of cool. They are neat. Whenever they sing one hand hits the girl. I like the gloves. Their lips float with their hands.

**Reasons why students disliked the Vowelles:**

They were not that funny. They were too girlish. They didn t have a face. They are not real people. They are weird. They just sing. They weren t good. They have girl stuff like lipstick. I don t like their gloves. They re not cool. They are not that interesting. They sound sort of weird. That s more of a girlish thing. They don t have heads. They didn t do very much. I don t like their music.

Responses to the following three questions are graphically presented as percentages of students who mentioned each of the specific characters along with reasons why:

- If you could invite any of these characters to your birthday party, which one(s) would you invite?
- Which one of these characters would you want to talk to if you were feeling sad?
- If you could pick one to read you a story, which one would it be?



**Reasons why students would invite Cleo to their birthday party:**

She s funny. She hugs the daddy lion.

**Reasons why students would invite Cliff Hanger to their birthday party:**

He might be still hanging from the cliff. He is cool. He can t get back up. He was the funniest. He hangs from a cliff.

**Reasons why students would invite Arty Smarty-pants to their birthday party:**

He is funny and nice. He gets my attention. He is really attractive. He is silly and has everything inside his pants.

**Reasons why students would invite Lionel to their birthday party:**

He s nice. He is funny. I like him. He s cool.

**Reasons why students would invite Sam Spud to their birthday party:**

He is cool. When the bad guy comes to my house he will know where he will be.

**Reasons why students would invite Fred to their birthday party:**

He is funny. He has a beard, glasses, and a hat and he can make funny noises.

**Reasons why students would invite Leona to their birthday party:**

She is sweet and a quiet baby. She is funny. I like her very much. I like girls. She is a little girl. I like her. She is pretty. She is the youngest of her family and I am the youngest of my family. She will be very funny. She s a baby. She is cute. I like to play with her. She s nice. She is a girl and sometimes she would invite boys. She is kind of like me.

**Reasons why students would invite Chicken Jane to their birthday party:**

I like them. She s funny. I like to play with them.

**Reasons why students would invite Click to their birthday party:**

She is my favorite one. She can always take stuff out of the book. She is nice. She can do anything. I think she is kind of fun. So when we read the books she can pull things out. He is fun. He would get things out of books for us. I want a robot at my birthday. I would want one for my computer. It could get me inside the books.

**Reasons why students would invite all the characters to their birthday party:**

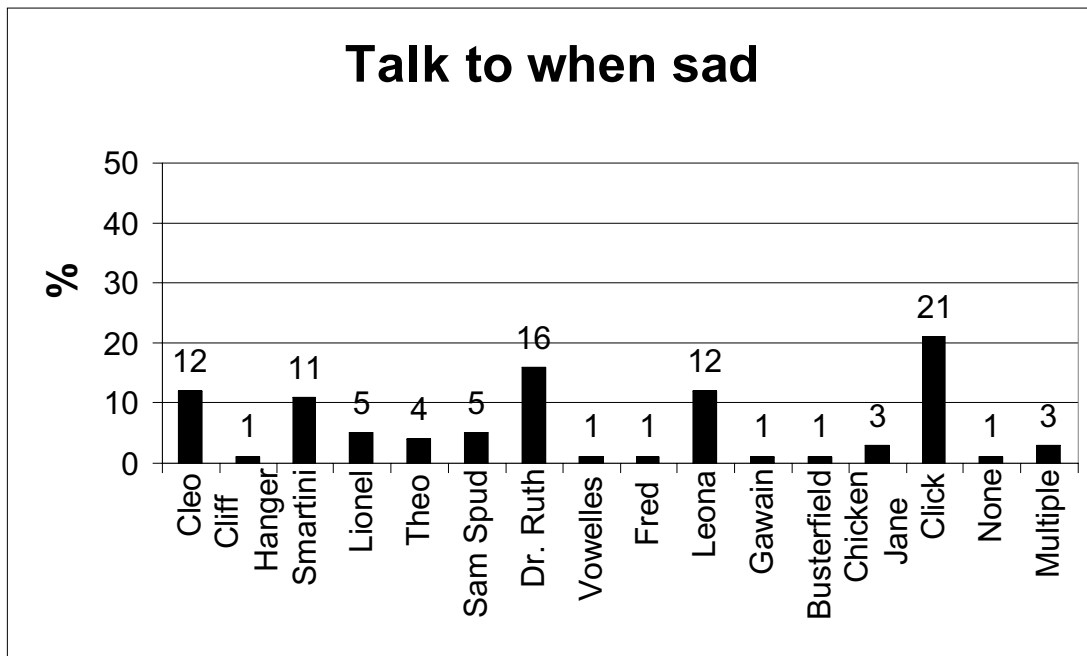
They are my favorite characters. I like them all so much. They are all really good characters and I like the team. I can t make up my mind. They are all so funny. I love everybody.

**Reasons why students would invite none of the characters to their birthday party:**

They are not real.

**Reasons why students would invite multiple characters to their birthday party:**

I love them. They are all my friends. They are all my best friends. They are girls (Leona, Cleo, Click). Every one but Sam Spud, they re funny. They would be my friends. Some of them (Smartini, Click, Lionel, Gawain) could entertain us.



**Reasons students picked Cleo to talk to if they were sad:**

She s the mother. She always changes everybody s feelings. She helps everybody out when they are sad. She knows every problem. She always comes up with good answers to your questions. She looks good. She s smart.

**Reasons students picked Cliff Hanger to talk to if they were sad:**

He got hurt and he s sad. I would play soccer and football with him.

**Reasons students picked Arty Smartypants to talk to if they were sad:**

He would probably make me laugh. He would cheer me up. He s funny. He had popcorn. He makes me laugh to mars. He does funny tricks.

**Reasons students picked Lionel to talk to if they were sad:**

He could find a book that I really like. He would say funny things.

**Reasons students picked Theo to talk to if they were sad:**

He can solve it. Dads always make you feel better. He knows everything.

**Reasons students picked Sam Spud to talk to if they were sad:**

He fixes stuff. He s funny. He s a detective. He writes the words funny.

**Reasons students picked Dr. Ruth to talk to if they were sad:**

She would help me. She s nice in the movie. She is the only one who knows how to help people at the library. She can help you when you are feeling bad. She makes us feel better. She is really fun to talk to. She makes words happy. She will solve the problem. She helps people so much.

**Reasons students picked Fred to talk to if they were sad:**

He cheers me up when I am sad.

**Reasons students picked Leona to talk to if they were sad:**

She s a good friend. She helps to make you happy. She s nice. She helps people. She s so pretty. She s my favorite. She knows how to solve problems.

**Reasons students picked Chicken Jane to talk to if they were sad:**

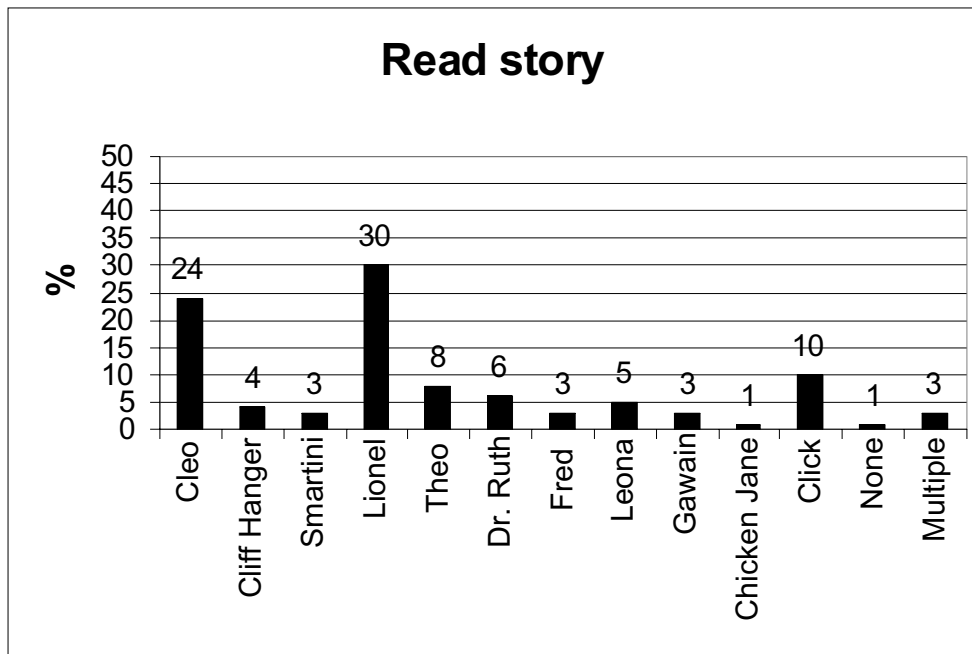
She s a girl.

**Reasons students picked Click to talk to if they were sad:**

She s kind of smart. He could make me a little happier. He knows a lot of stuff. She s usually funny. She helps me. She could bring stuff out of books. I have dinosaur books and I always wanted a dinosaur to come alive. He helps the lions. He makes people glad. She s the smart one. She s a robot, robots know a lot. She can make you really happy.

**Reasons students picked more than one character to talk to if they were sad:**

They make you stop being sad (Dr. Ruth, Fred, Gawain, Smartini). Theo and Cleo, because they are the parents and you should talk to parents about it.



**Reasons students picked Cleo to read them a story:**

She's nice. I like her and she's fun. She's a great reader and she goes in the book. She reads stories to people. She's the mom. She's a good reader. She's grown up. She's a grown up and she can read all the long words. She likes helping people. I like how she reads stories. She always reads.

**Reasons students picked Cliff Hanger to read them a story:**

I want him to read everything in his backpack. He has a book in his backpack.

**Reasons students picked Arty Smartypants to read them a story:**

He would probably get a goofy story out of his pants. He can do funny voices.

**Reasons students picked Lionel to read them a story:**

He knows how to read. He is a good reader. He reads so good. He's a smart reader. He reads and talks in any place. He's funny. He reads my favorite books. He reads the book Cliff Hanger.

**Reasons students picked Theo to read them a story:**

He's nice. He knows how to read. In the TV show he always read the books. He's bigger and smarter.

**Reasons students picked Dr. Ruth to read them a story:**

She is a good reader. She can read me my Star Wars books.

**Reasons students picked Fred to read them a story:**

He always plays with the letters. He's funny.

**Reasons students picked Leona to read them a story:**

She's my favorite. I think I could read her a story.

**Reasons students picked Gawain to read them a story:**

He can get his knight suit on.

**Reasons students picked Chicken Jane to read them a story:**

I like the song they sing.

**Reasons students picked Click to read them a story:**

He's very special. He can turn the pages. He never makes mistakes with his words. He could get anything out of the story. She is better at reading. She is a robot mouse.

**Reasons students picked none of the characters to read them a story:**

**Reasons students picked more than one character to read them a story:**

They read good and they are lots of fun (Dr. Ruth, Fred, Gawain).

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When asked, *Did you learn to read any new words from the words on the screen* 75% answered yes. Students were further asked *if they remembered any of the words they learned*. Students responded with the following words: Mop, Fuzzy, Bunny, Muddy, Rocket, Intelligent, Helicopter, Cap, Sam Spud, Shark, Water, Boat, Spot, Chicken, Vowelles, Lion, Great, Look, Leona, Begin, Glad, Jane, Cliff Hanger, Come, In, Hug, Wig, Trick, Run, Bone, House, Glad, Smarty Pants, Cars, Toothpaste, Toothbrush, Alligator

### SECTION 3

#### PARENT AND TEACHER COMMENTS ABOUT *BETWEEN THE LIONS*

Prepared by

**Nii Sai Doku and Patty Eskrootchi**

SCHOOL 1: School one is a small school located in an urban area in the poorest county in Kansas. Average parent education was 11.8 years, average income was between \$25,000 and \$29,000. This school was our most at-risk school.

1. Male first grader, 6.5 years. This child was somewhat engaged while watching the program.
2. Male, kindergarten student, 6 years. This child was somewhat engaged while watching the program.

**Parent s comments:** Glad he did it and they took his picture.

3. Male first grader, 7 years. This child was somewhat engaged while watching the program.

**Parent s comments:** He does not like it.

4. Male first grader, 7 years. This child was somewhat engaged while watching the program.

5. Female first grader, 7.5 years old. This child was not at all engaged while watching the program.

**Parent s comments:** About magical mouse.

6. Male, kindergartener, 6.5 years. This child was somewhat engaged while watching the program.

7. Female, kindergartner, 6 years. This child was somewhat engaged while watching program.

8. Female kindergartener, 5.5 years. This child was somewhat engaged while watching the program.
9. Female, kindergartener, 6 years. This child was somewhat engaged while watching the program.
10. Female, first grader, 6.5 years. This child was somewhat engaged while watching the program.

**Parent s comments:** She has talked about watching movies with lion, mouse, and girl pirate.

11. Female, first grade, 7 years. This child was somewhat engaged while watching the program.
12. Female, kindergartener, 6.5 years. This child was highly engaged while watching the program.
13. Female first grader, 7 years. This child was somewhat engaged while watching the program.

**Parent s comments:** She has talked about fuzzy wazzy and others

14. Male first grader, 6.5 years. This child was somewhat engaged while watching the program.

**Parent s comments:** It s about 2 lions reading and it s funny.

15. Female kindergartener, 6 years. This child was somewhat engaged while watching the program.
16. Male, first grader, 6.5 years. This child was somewhat engaged while watching the program.
17. Male, first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** He said the movie was about 2 lions that went to a library and the mouse s name was Click and they clicked on the mouse to get things out of the computer. He also said they liked the band.

18. Female, first grader, 6.5 years. This child was highly engaged while watching the program.
19. Female first grader, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** It s a program to learn to read with funny videos.

20. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.
21. Male kindergartener, 6 years. This child was somewhat engaged while watching the program.
22. Female kindergartener, 7 years. This child was highly engaged while watching the program.
23. Female first grader, 7 years. This child was somewhat engaged while watching the program.

**Parent s comment:** She mentioned it after I filled this out last time.

24. Male kindergartener, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** He said it s a program so the lions read a book and pretend to be in the book.

25. Male kindergartener, 6.5 years. This child was highly engaged while watching the program.

26. Male first grader, 6.5 years. This child was highly engaged while watching the program.

27. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** She learned to read because of it.

28. Male kindergartener, 5.5 years. This child was highly engaged while watching the program.

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SCHOOL 2: This school was located in a suburban city just outside of Kansas City, Missouri. Parent education averaged 13.9 years, average income was between \$25,000 to \$35,000. The school was identified at the most at-risk for its district, with 61% of the children receiving free or reduced lunches. For the most part, this was our highest performing school.

29. Female, first grader 7 years. This child was highly engaged while watching the program.

**Teacher s comment:** (Child) sings the opening song, Cliff Hanger, etc. She was actively involved saying words that came up on the screen.

30. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** When she s been home sick she has watched it on T.V and has told me things on the show.

31. Male first grader, 8 years. This child was highly engaged while watching the program.

**Parent s comment:** He said the program was funny-he especially liked Gwen s word, and smarty pants he also talked about Cliff Hanger.

**Teacher s comment:** Told me about it being on PBS and was excited about that! Positive feedback from parent to me.

32. Female, first grader, 7.5 years. This child was highly engaged while watching the program.

**Parent s comment:** She really enjoys the program and tells me what takes place on the show I got a chance to watch it on T.V. today and thought it was cute.

**Teacher s comment:** (Child s) skills are very high- she enjoyed the videos even though I do not think they were at a level as advanced as she is.

33. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** It s a T.V. show to help you learn to read. She says it s a mystery- you have to find out where to go and stuff like that.

34. Male first grader, 6.5 years. This child was highly engaged while watching the program.

35. Male first grader, 8 years. This child was highly engaged while watching the program.

**Parent s comment:** My child loves Between the Lions He talks about it all the time. It has started on PBS and we watch it after school

36. Male first grader, 7 years. This child was highly engaged while watching the show.

**Parent s comment:** Likes the show

**Teacher s comment:** (Child) cheered when we came to the part of the day to watch a video. Love it!

37. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** She enjoys the videos. She said it helped her to understand sounds. She had fun doing this program.

**Teacher s comment:** Participating actively while watching.

38. Female first grader, 7.5 years. This child was somewhat engaged while watching the program.

**Teacher s comment:** (Child) has trouble staying on task for everything we do. She struggles even in a group of 2 or 3. She was able to focus for about half each show she watched.

39. Male first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** He told me they watched the program and that it was good.

**Teacher s comment:** Has favorite characters from the show.

40. Female first grader, 6.5 years. This child was highly engaged while watching the program.

**Teacher s comment:** Sung along with opening song.

41. Female first grader, 7 years. This child was highly engaged while watching the program

**Parent s comment:** Lion who wants to read. Mouse didn t laugh.

**Teacher s comment:** Loved singing along with the opening song of the tapes.

42. Female kindergartener, 5.5 years. This child was highly engaged while watching the program.

**Parent s comment:** It is a series of stories from what I understand-she said when you cry wolf and there isn t a wolf nobody will believe you anymore and if you build things and you try to stack them, you won t be able to touch the sky.

**Teacher s comment:** Loved it!!

43. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Teacher s comment:** (Child) variedly Loved the whole aspect of this show! You really touch a spark of interest with him.

44. Female kindergartener, 6 years. This child was highly engaged while watching the program

**Parent s comment:** She said they were watching it at school and that she loved it. She kept asking to watch it at home. We found it on PBS. Good show.

**Teacher s comment:** Child) usually sat quietly while watching, but would really come to life during a musical part!

45. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Teacher s comment:** Sam enjoyed everything about the show. He had many favorites and would often talk and discuss the shows, even past ones, throughout the day.

46. Male kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comments** He loves its. Wants to watch it at home.

**Teacher s comment:** (Child) loved Arty and Sam Spud. He would often replay Sam Spud during free choice play time .

47. First grade kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** Very excited to watch it. Loves the theme song.

**Teacher s comment:** (Child) is extremely gifted, yet still enjoyed every aspect of every program. He liked the fact that he could read along with the printed stories.

48. Male kindergartener. 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** He liked it. It was fun. He described some of the characters.

**Teacher s comment:** He loved everything about the shows. He also remembered everything about the shows! He loved to sound out the words and enjoyed the stories behind the themes .

49. Female, kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Teacher s comment:** She loved the Vowelles and the singers that did the sounds and the name videos .

50. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Parent s comment:** When we watch PBS in the mornings, he wants to know when the show will be coming on so he can watch it.

**Teacher s comment:** He loved Arty Smartypants! He also loved Gawains and Cliff Hanger. He liked the action- part of videos- he was very excited about all of them.

51. Female kindergartener, 6 years. This child was highly engaged while watching the program.

**Parent s comment:** It s funny, she likes it

**Teacher s comment:** She enjoyed the program-I did not make any observation of her being overly excited .

52. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Teacher s comment:** She loved the different costumes that the lion family occasionally wear. Especially on the W segment. She would ooh and aah!!

53. Male kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comments** Watch it everyday for a little while. It s fun. Learned more words.

**Teacher s comment:** (Child) enjoyed the videos- especially arty and Gawains He would occasionally write about them in his journal entries .

54. Female kindergartner, 6 years. This child was highly engaged while watching the program.

**Parent s comment:** It s funny and good.

**Teacher s comment:** She loved them! Enjoyed every aspect of them and sometimes would share the ideas with her 1<sup>st</sup> grade sister who did not get to watch.

55. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Teacher s comment:** (Child) loved it, things are different for (child) to learn and comprehend; but I could tell that often a few shows, he was really getting into it and looked forward to it every day.

56. Female kindergartener, 5.5 years. This child was highly engaged while watching the program.

**Parent s comment:** She said that the show is funny and she watched it at school. She watches it at home now.

**Teacher s comment:** Was always very excited about watching the show. She loved the vowels , and would often shout out the words being displayed or changed.

57. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Teacher s comment:** Often sat Spellbound, always very excited when she knew the video was about to start. She loved Arty Smartini. Often shouted out the words being displayed on the screen .

58. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Parent s comment:** He tries to tell me about each video they watch; how letters came together to make lots of words.

**Teacher s comment:** (Child) is very animated, theatrical, and discusses every minute of every episode. He would often discuss the shows, and would often act them out and play the characters during recess.

59. Female kindergartner, 5.5 years. This child was highly engaged while watching the program.

**Teacher s comment:** (Child) would act out some of the characters with his friends on the playground. He loved it!!

60. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** She really likes the videos. She talks about them quite often.

**Teacher s comment:** Loved it!

61. Male kindergartener, 6.5 years. This child was somewhat engaged while watching the program.

**Parent s comment:** (Child) enjoys the program and shares things with me about it.

**Teacher s comment:** Was often sleepy at the beginning of the video- but as we progressed in watching them everyday- he wouldn t go to sleep and look forward to them!! He loved Arty and Gawain .

62. Male kindergartener, 6 years. This child was somewhat engaged while watching the program.

**Teacher s comment:** Missed the viewing often due to Dr s appointments etc. He looked forward to them when he was able to view them.

63. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** Tells me it s a certain channel at a certain time, just doesn t know what day.

**Teacher s comment:** She loved them! She sat in awe of them everyday!!

64. Male kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** He didn t say anything specific, just mentioned it.

**Teacher s comment:** (Child) usually played Cliff Hanger or Gawain s Word outside on the playground with several of his friends.

65. Male kindergartener, 6 years. This child was highly engaged while watching the program.

**Teacher s comment:** He loved the action segments of the videos. He loved Arty smartypants, Sam Spud, Cliff Hanger, and Gawains Word. He often acted these segments out while at recess.

66. Female kindergartener, 6 years. This child was highly engaged while watching the program.

**Parent s comment:** Well, everyday she surfs the T.V. to find the program. She also says she really enjoys it. She says she likes the Popcorn one.

**Teacher s comment:** She tried hard to stay awake every day- She looked forward to them and didn t want to miss them.

67. Female kindergartener, 6.5 years. This child was highly engaged while watching the program.

**Parent s comment:** She watched a program called between the Lions, she liked it. It was good.

**Teacher s comment:** (Child) loved the girl characters. She loved the 3 women singers and the Name Game Songs.

68. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** She told me about a program on channel 11. She watches that program almost everyday. It s a very good program. She has learned a lot with it.

**SCHOOL 3:** This school was located in a rural area outside of Kansas City, Kansas. Average parent education was 13.1 years, average income was between \$30,000 and \$34,999. This school is similar to the other Kansas school in demographic characteristics.

69. Male first grader, 7 years.

**Parent s comment:** He says that he likes when she puts things in the book and then when they drop out of the book. He also sings a song from it.

70. Male first grader, 7 years. This child was highly engaged while watching the program.

**Teacher s comment:** He loved the songs.

71. Female first grader, 6.5 years. This child was highly engaged while watching the program.

**Teacher s comments:** Loved it.

72. Female first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** She loves it.

73. Male first grader, 7.5 years. This child was highly engaged while watching the program.

74. Female first grader, seven years. This child was highly engaged while watching the program.

75. Female first grader, 7 years. This child was highly engaged while watching the program.

**Teacher s comment:** Loved the songs.

76. Male first grader, 6.5 years. This child was somewhat engaged while watching the program.

**Parent s comment:** He has mentioned it on a few occasions but only talked about it in detail on Friday and he said it was about someone or something that cried wolf.

77. Female first grader, 7 years. This child was highly engaged while watching the program.

**Teacher s comment:** Loved it.

78. **Female first grader, 7 years. This child was highly engaged while watching the program.**

**Parent s comment:** **She wants to watch it at home but it s on at 12.00 and 5.00-she watches it at 5.00. She talks about all the characters.**

79. Male first grader, 8 years. This child was highly engaged while watching the program.

**Parent s comment:** He talks about one of the songs he really likes on the show.

80. Male first grader, 7 years. This child was highly engaged while watching the program.

**Parent s comment:** A Lion goes to the library to learn new words.

Teacher s comment: **Loved it .**

81. Female first grader, 7.5 years. This child was highly engaged while watching the program.

Parent s comment: **She says it s funny and fun and she also wishes she could see more of the Between the Lions.**