

## **Supporting Emergent Readers During the Summer Months: A Cross-Sectional Study of Young At-Risk Readers.**

John McNamara, Ph.D.  
*Brock University*

Jackie Van Lankveld, MA  
*Speech Services Niagara*

Meghan Woodham, MA  
*Speech Services Niagara*

Linda Bell, BA  
*Speech Services Niagara*

Recently, significant attention has been paid to the summer learning loss phenomenon. In fact, many stakeholders have referred to the summer learning loss phenomenon as a *national dilemma* (see <http://www.summerlearning.org/>). It has been argued that the learning gap created by summer vacation actually *decreases* student achievement levels over the course of the summer. In a synthesis of 39 studies Cooper, Nye, Charlton, Lindsay, & Greathouse (1996) indicated that summer learning loss equalled at least one month of instruction as measured by grade level equivalents on standardized test scores whereby children's test scores were at least one month lower when they returned to school in the fall than scores were when students left in the summer. Although some stakeholders may take issue with such findings arguing that the benefits of a summer break outweigh the reversing effect on achievement, it is the impact of the summer learning gap on less advantaged children that is most concerning.

The findings of the Cooper et al. (1996) review indicated specifically that the summer learning loss phenomena may be particularly troublesome for less advantaged children including those requiring special educational needs, children from lower socio-economic backgrounds, and children learning English as a second language. Specifically, it may be the reading or literacy-based skills that are most affected during the summer months. For instance, Entiwise, Alexander, and Olson (2001) studied children from their Baltimore School Study and found that achievement levels of all children increased during their grade one school session but found that during the summer months between grades one and two, when school was out of session, particularly vulnerable children, those within the lower class percentiles for literacy and math, decreased in their learning compared to stronger readers who gained approximately 15 points in their standardized reading achievement. Katsiyannis (1991) found similar results when studying summer learning loss and children with learning and behavioral difficulties. Specifically, Katsiyannis (1991) found that without continuous instruction throughout the summer months, many children with learning disabilities fall further behind their grade-level peers.

The summer learning loss phenomenon is not limited to older school-aged children but in fact, may be most important for children in their early years of schooling. In a particularly poignant study researchers (Downey, von Hippel & Broh, 2004) examined the summer learning in 17,000 kindergarten and first grade children from the Early Childhood Longitudinal Study. The findings of this research found that even at an

early age, school is a significant equalizer between strong and vulnerable learners. The researchers concluded that even for children in kindergarten, the achievement gap between strong and vulnerable learners widened significantly when school was not in session during the summer months. In general, research illustrated clearly that the summer learning gap can be particularly problematic for vulnerable children and furthermore, that literacy skills may be the area of achievement that is most affected.

A seemingly natural solution to the problem of summer learning loss is implementing summer learning programs – particularly for vulnerable children and families. The National Summer Learning Association (<http://www.summerlearning.org>) suggests that an effective summer learning program is one that successfully accelerates learning and supports positive youth development as part of a proactive approach to stemming summer learning loss. A successful summer program achieves and maintains high-quality programming through strong leadership, careful planning, extensive summer staff development, strategic partnerships, continual evaluation, and a focus on sustainability. The National Summer Learning Association highlights only a handful of successful programs (see <http://www.summerlearning.org>) however, indicates also that many summer programs are not successful for a number of reasons.

One such reason is the need to couch remedial literacy programs within a family context. The notion of *family literacy* is becoming increasingly important, as research has begun to elucidate the powerful effect that families can have on children's individual literacy achievement. For example, Timmons (2008) suggests that literacy interventions are most powerful when they include family involvement. Higher grades and test scores, more consistent completion of homework, and high self-efficacy are all linked with parental involvement (Desimone, 1999). However, Timmons (2008) indicated also that there are a number of challenges facing program designers. Timmons' review of family literacy programs found that in many cases, families were not *authentic* partners in the intervention process and it is suggested that program designers strive to create a unique, individual needs-based model for each participating family. Authentic caregiver partnership entails that intervention staff and parents are co-constructing and co-delivering the intervention program. In the current study, caregivers spend a significant amount of time working with program staff, engaging with their children in literacy activities aimed at improving their print and phonological awareness skills.

For these reasons, school boards, community agencies, and researchers have begun collaborating to look for creative ways to support vulnerable learners during the summer months. However, although all stakeholders are in agreement about the benefits of summer learning programs for vulnerable learners, there remain a number of questions about how to most effectively design and implement summer literacy programs. Within the region of the current study, a number of community agencies have been working towards developing supports for vulnerable children during the summer months. For instance, Speech Services Niagara (SSN), a community agency serving approximately 1900 pre-school children demonstrating difficulties in their speech and/or language development, has recently implemented workshops in local libraries and early learning centres aimed at educating parents on how best to facilitate their child's emergent literacy skills. More recently, many regional school board administrators and staff expressed interest in exploring way to support vulnerable children during the summer months. These mutual interests led to the present partnership between the current research team, Speech Services Niagara, and a local school board with the common goal of designing, implementing, and assessing the efficacy of a summer literacy program aimed at supporting young vulnerable learners and their families from the local community.

The current study investigates the impact of a summer family literacy program on vulnerable readers who had recently completed their junior kindergarten year. Children in the study's program group attended a four-week summer family literacy program. One of the objectives of the study was to include primary caregivers as authentic partners in a summer literacy program, the research team adopted the

Learning Begins at Home (LBH): A Research-Based Family Literacy Program Curriculum (Doyle, Hipfner-Boucher, & Pelletier, 2008). The LBH program was designed to include caregivers as literacy program participants and also was designed to be flexibly adapted to suit the needs of each individual participating family.

### **Participants.**

A total of 36 children along with at least one of their caregivers participated in this study. All participating children and families were living in Canada and enrolled in junior kindergarten classrooms within the same school board from Southwestern Ontario. At the time of the first day of the program, the mean age of children was 54 months. Study eligibility was determined using a two-step referral process. First, children were identified as having significant literacy needs based on their classroom teacher's analysis of their print and phonological awareness skill achievement. As a second step, children were assessed by a trained Speech and Language Pathologist specializing in early literacy, to identify whether they met specific eligibility requirements for participation in the summer program. Specifically, children were assessed using the Test of Preschool Early Literacy (TOPEL) (Lonigan, et al., 2007). The TOPEL has been indicated as a significant predictor of later reading achievement. Children with overall Early Literacy Index scores below the 25%ile as indicated in the TOPEL technical data were eligible to participate in the study. Children were also assessed using a basic measure of letter identification and letter sound identification – both measures indicated by research as being significant predictors of later reading achievement (reference withheld). Once screened and deemed eligible for the study children were randomly assigned to an intervention and control group. After nineteen (19) of the 36 participating children were in the intervention group and 17 children were in the control group. The unequal numbers were due to attrition from the original number of participants (40). To assess randomization a between-group one-way analysis of variance was computed at the pre-intervention assessment point for each of the four dependent measures. Age and gender were entered as covariates for each analysis. For the TOPEL measure of Print Knowledge, the difference between the pre-intervention scores for the control group and the intervention group was not statistically significant,  $F(1, 32) = .24, p = .629, \eta_p^2 = .01$ , indicating that there was no difference between groups at the pre-test assessment point, when age and gender were controlled for. A similar result was found for the TOPEL measure of Phonological Awareness,  $F(1, 32) = .56, p = .460, \eta_p^2 = .02$ , as well as for Letter Identification,  $F(1, 32) = 1.58, p = .218, \eta_p^2 = .05$ , and for Letter Sound Understanding,  $F(1, 32) = .10, p = .757, \eta_p^2 = .00$ . Data were screened to test for normality assumptions; the normality assumptions were met and no outliers were found.

### **Procedures**

Children in the intervention group and one primary caregiver then participated in a five-week summer literacy program. As described in the previous section, the literacy program used in this study was an adaptation of the Learning Begins at Home program (Doyle, et al., 2008). This program was not specifically designed for summer use but more generally addresses the literacy needs of young children and furthermore includes caregivers as primary agents of program delivery. The LBH program focuses on three essential skills to emergent literacy; print awareness, phonological awareness, and letter-sound knowledge. The study's adaptation to the program included eight emergent literacy skill-based sessions focusing on specific components of emergent literacy. The sessions are described in detail in Table 1. Although the program included eight different lessons, throughout the program the focus remained on children's development of print and phonological awareness. For instance in Session Four (Talk with your Children) the focus was on developing oral vocabulary with a specific emphasis on words and letters with the intent to relate these to print and phonological awareness skills. The program was chosen by our research team as it is designed to be a culturally responsive family literacy program designed to support kindergarten aged children and their caregivers.

Table 1.  
Description of the Learning Begins at Home instructional sessions.

Session Focus	Instructional Session Description	
	Children's Session	Parent's Session
<u>Session one</u> Introduction to program Importance of reading	Develop a sense of book awareness; connecting pictures to print; setting a reason for reading.	Overview of the program; caregivers' expectations; promoting literacy at home; explaining dialogic reading.
<u>Session two</u> Thinking about words and sounds	Focused on rhyming skills, segmenting syllables, clapping syllables in their names, initial letter recognition, blending simple compound words.	How to support children in listening to words and sounds; teaching children how to rhyme, segment syllables; games to promote children's recognition of initial letters.
<u>Session three</u> Letter names and sounds	Scavenger hunt for letters, fishing for letters, letters out of play-dough. Each activity had children identify letters and say the corresponding letter sound.	The importance of letter and letter sound identification; the relationship between letter knowledge and later reading; how to promote letter knowledge at home through activities such as letter bingo or concentration.
<u>Session four</u> Talk to your child	Children were encouraged to orally engage with teachers through activities such as filling in the last word of a rhyme or song. Children followed oral instructions in how to make puppets and play word-guessing games.	Emphasized the link between children's oral language development and literacy; focused on strategies to develop oral language skills such as asking questions about daily happenings, telling stories, etc.; increasing oral vocabulary by introducing new words into children's existing repertoire.
<u>Session five</u> Environmental print	Focused on relationship between environmental symbols (i.e. Stop sign) and word meaning; searched classroom for environmental print objects (i.e. Exit sign, fire alarm, etc.); emphasized importance of reading within real-world contexts.	Focused on the purpose and importance of environmental print; strategies on pointing out environmental print within everyday activities; introduced games and strategies using environmental print (i.e. I-spy).
<u>Session six</u> Read with your child	Focused on book understanding; relevance books and reading with caregivers; vocabulary development within the context of a book.	Why reading aloud to your child is important; discussed book handling skills, reading with a positive attitude; developing children's vocabulary while reading; developing a sense of narrative while reading; allowing children to engage in oral reading (i.e. making predictions, etc.); practiced effective dialogic reading; introduce the idea of a "book walk".

Session Focus	Instructional Session Description	
	Children's Session	Parent's Session
<u>Session seven</u> Storytelling	Children are read a story (i.e. Little Red Riding Hood); children illustrate favourite part of story; retell the story; using simple oral sentences to describe their illustration of the story; make up their own story.	Discussed importance of telling stories with and without a book; strategies to encourage discussion about everyday activities; importance of children telling stories about everyday or special events; using prompts to encourage children's story telling.
<u>Session eight</u> Print awareness	Drawing a picture and writing letters to parents about the picture; focus on the importance of print and writing in delivering information or messages.	Emphasized the importance of children developing print awareness and writing skills; the importance of allowing children's creative writing and inventive spelling; strategies to promote creative writing at home; using children's picture-making and writing to illustrate a story.
<u>Session nine</u> Exit session	Children post-program emergent literacy achievement was assessed with TOPEL and letter knowledge measures.	Parents were debriefed on the importance of emergent literacy at home; a celebration of the completion of the program.

The summer program took place for five weeks during the months of July and August where families attend twice weekly from 4 – 6pm. As an adaption from the original LBH program, the current summer literacy program consisted of one introductory session, 8 two-hour instructional sessions (described in Table 1), and 1 post-program session where the first set of post-test data was collected and families were debriefed on the program. In general, each two-hour instructional section was sub-divided into three components – the first component (30 minutes) has children and caregivers working together with one teacher reviewing the objectives of the evening's lesson and collectively reading a story that was themed around the lesson's objectives. Component two (45 minutes) had children and parents working separately. Children worked in small groups of three or four with a teacher supervising each group. Children worked on the skills related to each session (i.e. letter identification) but more so on the skills in which they required support. Parents worked in a separate room and participated in a workshop led by a Speech and Language Pathologist specializing in early literacy. The workshop was based on providing parents with activities, strategies, and tactics that they could use at home to support the individual literacy-based needs of their child. Component three (30 minutes) had children and parents coming back together to practice and implement the strategies and tactics that parents had learned in their emergent literacy workshop. The third component ended with a story read to the entire group. Children and caregivers were provided with complimentary books and materials (i.e. markers, magnet letters, etc.) to support them in implementing at home the literacy strategies and tactics that they learned in the program. The program and materials were complimentary for all participants and each evening families were provided with supper.

Children in the control group did not attend a summer intervention program. This was consistent with one of the goals of the study to measure the effect of the summer learning loss on young vulnerable children. Children and families in the control group were offered a 2-hour literacy workshop at the end of the summer after the first set of post-tests was completed.

## Measures.

All participating children in both the intervention and control group were administered three sets of assessments; 1) a pre-test assessment before the program began; 2) a post-test assessment on the last evening of the program (post-test I) and; 3) a second post-test assessment approximately six months after the beginning of the program (post-test II). All three sets of assessment included the following measures:

***Test of Preschool Early Literacy (TOPEL).*** The Test of Preschool Early Literacy (Lonigan, et al., 2007) is a theoretically sound instrument for identifying preschoolers who are at risk for literacy problems, therefore, allowing early intervention. The *TOPEL* provides valid and reliable raw and standard scores. The normative sample consists of 842 preschool-aged children (3 to 5 years). The current study used two *TOPEL* subtests – print knowledge (36 items) and phonological awareness (27 items).

***Print Knowledge.*** This subtest has 36 items and measures alphabet knowledge and early knowledge about written language conventions and form. The child is asked to identify letters and written words, point to specific letters, name specific letters, identify letters associated with specific sounds, and say the sounds associated with specific letters. Reliability coefficients for the *TOPEL* Print Knowledge for four-year old children was ( $\alpha = .96$ )

***Phonological Awareness.*** This subtest has 27 items and measures word elision and blending abilities. The child is asked to say a word, and then say what is left after dropping out specific sounds (elision) for the first 12 items. The child is asked to listen to separate sounds and combine them to form a word (blending) for the remaining 15 items. Reliability coefficients for the *TOPEL* Print Knowledge for four-year old children was ( $\alpha = .88$ )

***Lower Letter Name Knowledge.*** Letter-name association clearly taps into something of critical importance in early reading (Juel & Meier, 1999). The major task of letter naming is mapping a visual symbol to a phonetic representation. Therefore, for this task children were shown all twenty-six lower letters of the English alphabet and asked to give the letter name. Students were scored as correct if they responded with the appropriate letter name.

***Letter-Sound Correspondence.*** Letter sound tasks required associating symbols with discrete sounds, which may be more challenging, because it requires isolating individual phonemes. Research has demonstrated that this skill has a significant causal effect on subsequent development of phonological skills (Juel & Meier, 1999). For this task students were shown lower-case letters and asked to give the corresponding sound. If students responded with a letter's corresponding soft sound (ex. /c/ as in race), they were prompted to think about another sound. The target sound was the hard consonant or short vowel sound. Students were scored as correct if they responded with the appropriate letter sound.

## Results

Pre-intervention, post-intervention, and December post-intervention means and standard deviations are illustrated in Table 2.

Table 2.

Means and standard deviations for the TOPEL and letter knowledge assessments at three assessment points.

		Pre-Intervention		Post-Intervention		December Post-Intervention	
		Mean	SD	Mean	SD	Mean	SD
TOPEL Print Awareness	Intervention group	11.1	5.8	17.6	7.4	22.5	7.4
	Control group	12.2	3.5	11.7	3.5	15.8	4.4
TOPEL Phonological Awareness	Intervention group	12.5	5.1	13.8	5.1	15.5	5.3
	Control group	10.8	5.4	11.9	4.6	14.9	4.0
Letter Names	Intervention group	6.5	4.2	10.5	5.6	13.8	5.8
	Control group	8.3	3.7	7.5	3.4	10.6	3.8
Letter Sounds	Intervention group	3.1	3.9	5.3	4.9	7.3	4.3
	Control group	3.4	3.1	2.1	1.5	5.3	2.5

The first set of analyses measured the immediate effect of the four-week summer family literacy program. To measure the effect of the program, an analysis of co-variance with the pre-intervention scores entered as co-variables was computed for all four post-intervention measures. Although preliminary tests of randomization revealed no significant pre-intervention between-group differences, pre-intervention measures were entered as covariates in these analyses to address any existing pre-intervention discrepancies.

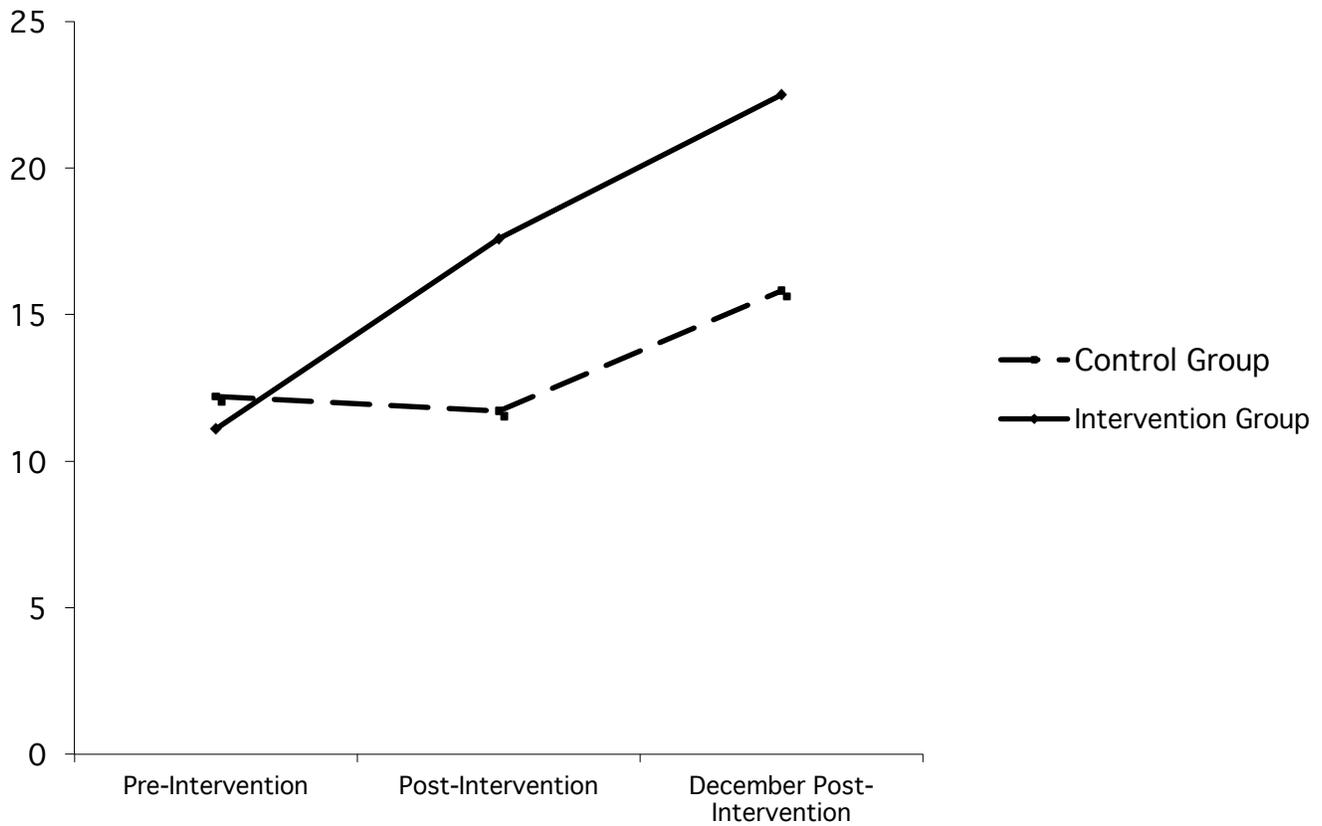
To recall, no between-group difference was found for Print Awareness before the intervention program. However, a statistically significant difference was found between groups on post-intervention scores on Print Knowledge,  $F(1, 31) = 18.05, p < .001, \eta^2 = .37$ . Couching this result within a visual inspection of the means (Table 1), it was evident that children in the intervention group scored statistically significantly higher than the control group on post-intervention measure of Print Knowledge. For ease of interpretation, raw unadjusted mean scores of pre-intervention and post-intervention assessments for Print Knowledge are illustrated in Figure 1.

Similarly, pre-intervention analyses revealed no statistically significant difference was found between groups for pre-intervention scores for Phonological Awareness. Unlike Print Awareness, no significant between-group difference emerged on post-intervention scores on Phonological Awareness,  $F(1, 21) = .70, p = .410, \eta^2 = .02$ . Situating this result against the visual inspection of the means (Table 1), it was evident that children in the intervention group did not score significantly higher than the control group on post-intervention measure of Phonological Awareness. This result is illustrated in Figure 2.

Pre-intervention analyses revealed no statistically significant between-group difference for Letter Names. However, a statistically significant between-group difference was found on post-intervention scores for Letter Identification,  $F(1, 31) = 25.39, p < .001, \eta_p^2 = .45$ . The result suggests that children in the intervention group scored statistically significantly higher than the control group on post-intervention measure of Letter Identification. This result is illustrated in Figure 3.

Pre-intervention analyses also revealed no statistically significant between-group difference for Letter Sounds. However, a statistically significant between-group difference was found on post-intervention scores for Letter Sounds,  $F(1, 31) = 18.39, p < .001, \eta_p^2 = .37$ . The result suggests that children in the intervention group scored statistically significantly higher than the control group on post-intervention measure of Letter Names. This result is illustrated in Figure 4.

A second objective of the study was to measure the 4-month sustainability of the gains associated with the summer family literacy program. To measure how significantly intervention gains were sustained a 2 X 2 repeated measures analysis of variance using post-intervention and December post-intervention means was computed for the four dependent measures. For Print Awareness, visual inspection of post-intervention and December post-intervention mean scores (see Table 2) indicated that both the intervention and control groups showed a gain in mean scores between post-intervention and December post-intervention. The intervention group increased Print Awareness scores from 17.6 (post-intervention) to 22.5 (December post-intervention) equating to a mean gain score of 4.9. The control group increased Print Awareness scores from 11.7 (post-intervention) to 15.8 (December post-intervention) equating to a mean gain score of 4.1. A repeated measures analysis of variance was computed to measure whether the increases in mean gain scores were significantly different between the intervention and control groups (see Table 5). For Print Awareness scores, the interaction between Group and Time was not statistically significant,  $F(1, 31) = .55, p = .464, \eta_p^2 = .02$ , indicating that both the intervention and control group showed similar magnitudes of growth in Print Awareness between post-intervention and December post-intervention. A test of simple effects indicates that there remained a between-group difference in means scores for Print Awareness,  $F(1, 31) = 21.31, p < .001, \eta_p^2 = .41$ . These results are illustrated in Figure 1.



*Figure 1. Unadjusted raw mean scores for Print Awareness for Intervention and Control Groups across Pre-Intervention, Post-Intervention, and December Post-Intervention Assessment Points*

For Phonological Awareness, visual examination of mean scores indicated that both the intervention and control group showed a substantial gain in mean scores between post-intervention and December post-intervention. The intervention group increased Phonological Awareness scores from 13.8 (post-intervention) to 15.5 (December post-intervention) equating to a mean gain score of 1.7. The control group increased Phonological Awareness scores from 11.9 (post-intervention) to 14.9 (December post-intervention) equating to a mean score of 3.0. A repeated measures analysis of variance was computed to measure whether the increases in mean gain scores were significantly different between the intervention and control groups (see Table 2). For Phonological Awareness, the interaction between Group and Time was not statistically significant,  $F(1, 31) = .45, p = .508, \eta^2 = .01$ , indicating that both the intervention and control group illustrated similar degrees of growth in Phonological Awareness between post-intervention and December post-intervention. A test of simple effects indicated that there was no longer a between-group difference in mean scores for Phonological Awareness,  $F(1, 31) = .24, p = .627, \eta^2 = .01$ . These results are displayed in Figure 2.

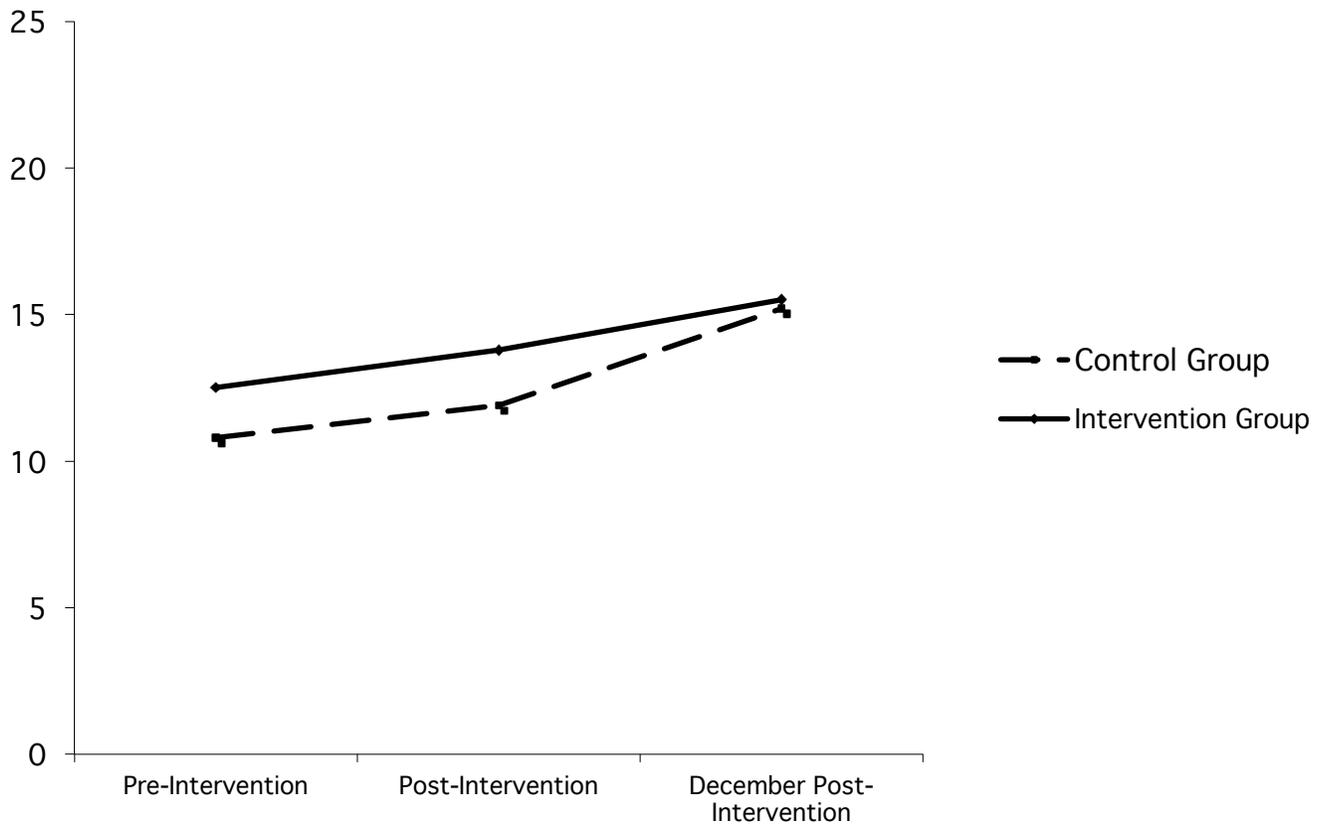
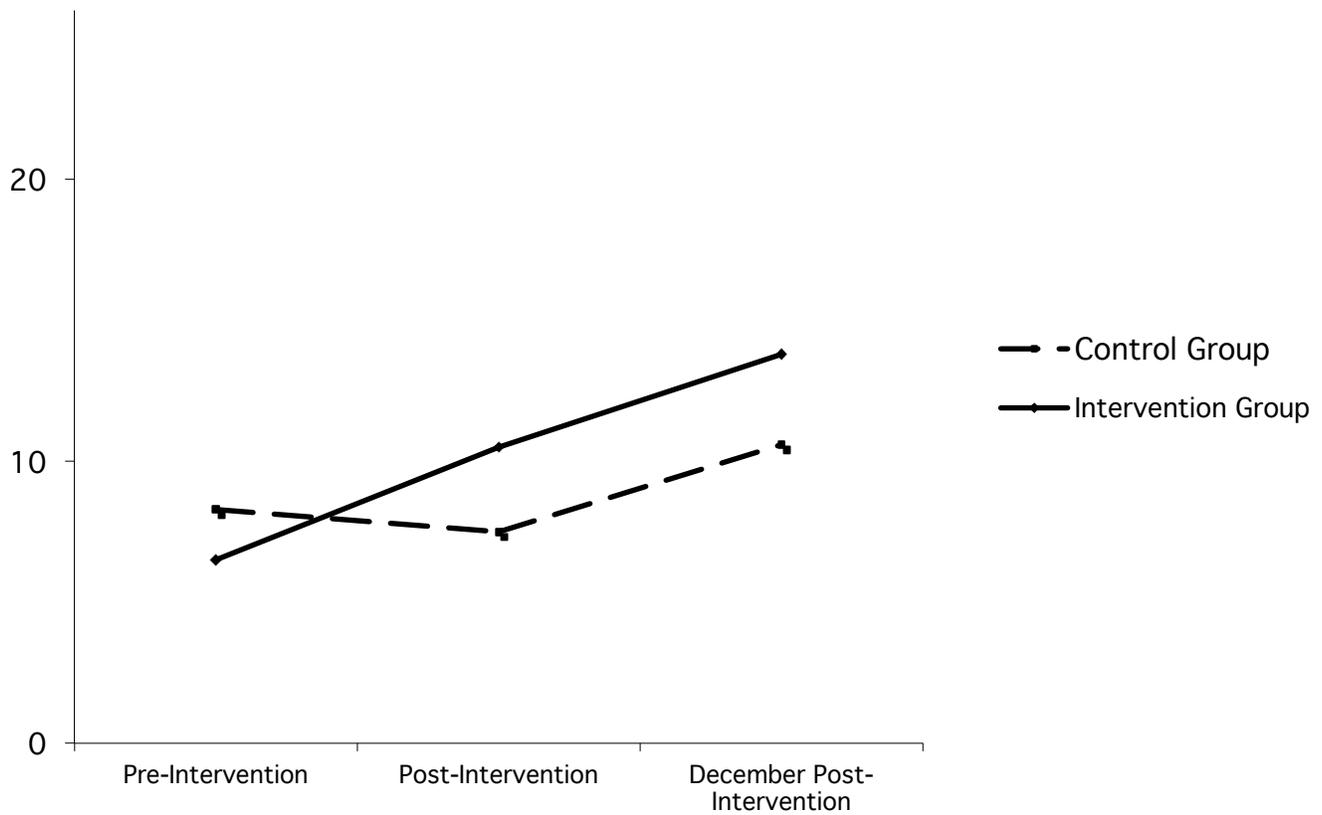


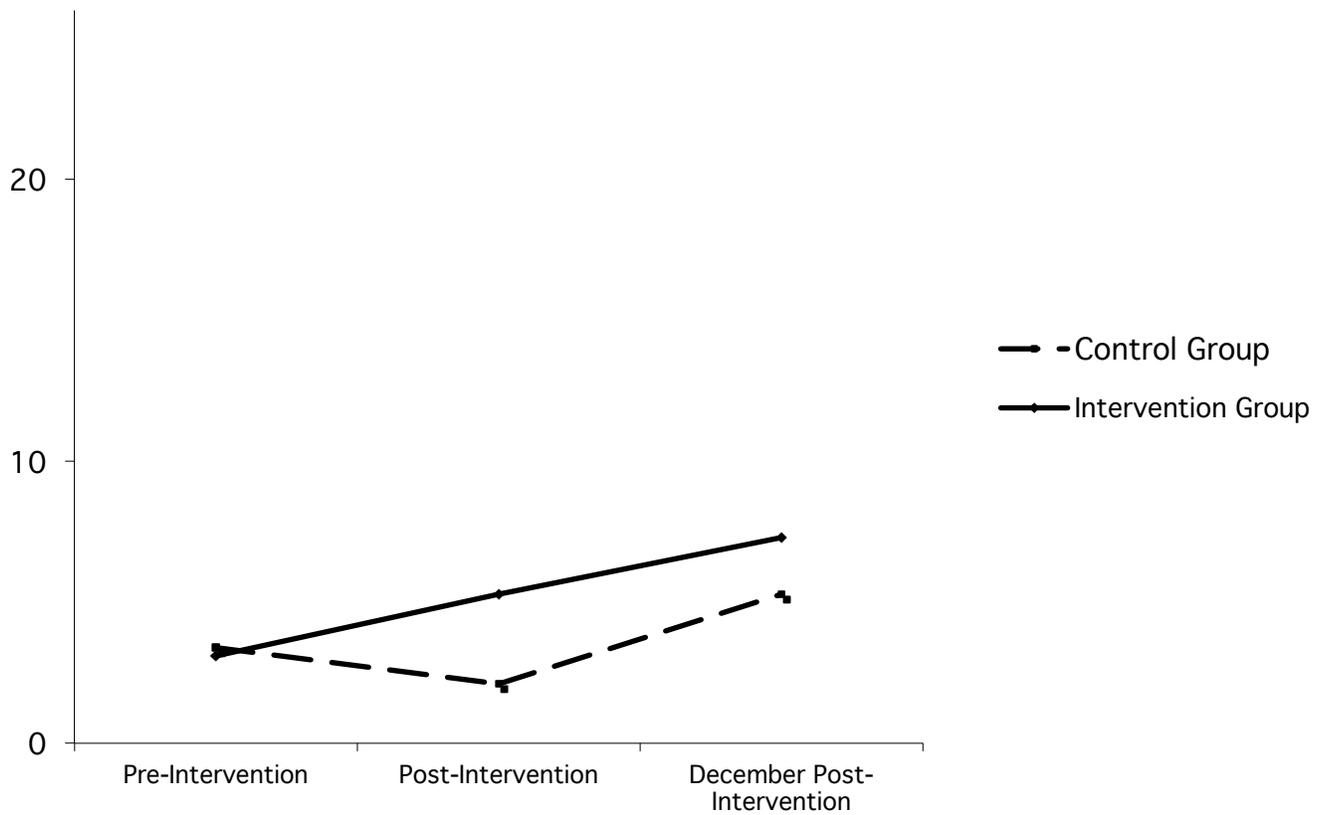
Figure 2. Unadjusted raw mean scores for Phonological Awareness for Intervention and Control Groups across Pre-Intervention, Post-Intervention, and December Post-Intervention Assessment Points

For Letter Identification, a visual examination of mean scores indicated that both groups showed a gain in mean scores between post-intervention and December post-intervention. The intervention group increased Letter Identification scores from 10.5 (post-intervention) to 13.8 (December post-intervention) equating to a mean gain scores of 3.3. The control group increased Letter Identification scores from 7.5 (post-intervention) to 10.6 (December post-intervention) equating to a mean gain scores of 3.1. A repeated measures analysis of variance was computed to measure whether the increases in mean gain scores were significantly different between the intervention and control groups (see Table 5). For Letter Identification, the interaction between Group and Time was not statistically significant,  $F(1, 31) = .24, p = .630, \eta_p^2 = .01$ , indicating that both the intervention and control group displayed similar magnitudes of progress in Letter Identification between post-intervention and December post-intervention. A test of simple effects indicated that there remained a between-group difference in mean scores for Letter Identification,  $F(1, 31) = 34.30, p < .001, \eta_p^2 = .53$ . These results are presented in Figure 3.



*Figure 3. Unadjusted raw mean scores for Letter Names for Intervention and Control Groups across Pre-Intervention, Post-Intervention, and December Post-Intervention Assessment Points*

For Letter Sounds, visual inspection of the means scores indicated that both groups showed a gain in mean scores between post-intervention and December post-intervention. The intervention group increased Letter Sound scores from 5.3 (post-intervention) to 7.3 (December post-intervention) equating to a mean gain score of 2.0. The control group increased Letter Sound scores from 2.1 (post-intervention) to 5.3 (December post-intervention) equating to a mean gain score of 3.2. A repeated measures analysis of variance was computed to measure whether the increases in mean gain scores were significantly different between the intervention and control groups (see Table 5). For Letter Sounds, the interaction between Group and Time was not statistically significant,  $F(1, 31) = 1.22, p = .277, \eta_p^2 = .04$ , indicating that both the intervention and control group exhibited similar levels of progress in Letter Sounds between post-intervention and December post-intervention. A test of simple effects indicated that there remained a between-group difference in mean scores for Letter Sounds,  $F(1, 31) = 12.25, p < .001, \eta_p^2 = .28$ . These results are illustrated in Figure 4.



*Figure 4. Unadjusted raw mean scores for Letter Sounds for Intervention and Control Groups across Pre-Intervention, Post-Intervention, and December Post-Intervention Assessment Points*

## **Discussion**

In general, results of the current study point to the effectiveness of the summer family literacy intervention aimed at supporting young vulnerable children. Specifically, when exploring the immediate impact of the intervention program, this study found statistically significant between-group differences for print and phonological awareness as well as both measures of letter awareness. This finding is in line with research calling for programs that address the summer learning loss phenomenon (Cooper et al., 1999). Research on summer learning loss would predict that children such as those participating in this study would demonstrate a summer learning loss characterized by significant decreases in their emergent literacy skills such as print and phonological awareness and letter knowledge. However, as a result of participating in the summer literacy program, children in the intervention group did not experience a summer learning loss and in fact, demonstrated significant gains in their emergent literacy skills. This was not the case for children in the control group. In fact, mean scores for three of the four dependent measures decreased from pre-intervention to post-intervention. Specifically, children not participating in the summer family literacy program showed achievement losses in print awareness, letter names and letter sounds. This finding is particularly troublesome for a number of reasons. First, it is important to recognize that their classroom teachers previously identified children participating in this study as vulnerable readers. In other words, these children were entering into their summer vacation already behind their grade-level peers in their emergent literacy. A second troubling implication of these findings was that children in the control group would be entering their next year of schooling even further behind in their print awareness, letter names, and letter sound scores lower than the scores from their previous year. In general, the findings here suggest that young vulnerable readers are at-risk for falling further behind their peers over the course of the

summer months – particularly in their print awareness, letter names and letter sounds. This summer learning loss phenomenon was not evident for phonological awareness – a peculiar finding that will be discussed separately.

A second objective of this study was to measure how well the achievement gains experienced by children in the intervention group could be sustained when they returned to school. To assess sustainability, all children were assessed in December of the following school year – approximately 4 months after the completion of the summer program. In general, the findings indicated that all children, regardless of their intervention group status, made significant gains in all four emergent literacy skills assessed in this study. As illustrated in Figures 1 – 4, children increased their phonological and print awareness, letter names and letter sounds between the end of the summer intervention program and the December post-test. This result was encouraging in that it suggests that all children benefited from their kindergarten educational experience. However, this study also measured the magnitude of growth in emergent literacy skills between the post-test and December post-test. As illustrated in Figures 1 – 4 and computed in the relevant analyses, for all four dependent measures both groups demonstrated similar patterns of growth. In other words, children in both the intervention and control groups demonstrated similar levels of skill development in print and phonological awareness as well as letter names and sounds. This result holds a number of implications. First, it should be noted that with the exception of phonological awareness, the achievement gap that was created between groups as a result of the summer intervention program remained constant four months after the program. One way of interpreting this finding was that the achievement gains created by the summer program were sustained for four months. In general, children in the control group failed to catch up to the children in the intervention group. This finding lends support to the efficacy of summer family literacy programming for vulnerable children.

An unusual finding throughout the analyses centred around phonological awareness. As discussed previously, the summer family literacy program did not affect group differences in phonological awareness and furthermore, children in the control group “caught up” to children in the intervention group during the period between the intervention and the December post-test assessment point. One explanation for this finding may be that phonological awareness is a more stable, inherent trait compared to print awareness, letter names and sounds. In fact, some researchers have proposed that print awareness, letter names and sounds are more influenced by environmental factors (schooling, parenting, intervention) whereas phonological awareness may be more influenced by inherent or genetic factors (Duke & Pearson, 2002; Juel & Meier, 1999; Olson, Forsberg, Wise, & Rack, 1994). This explanation would invite the notion that the summer family literacy program used in this study would have more influence on print awareness, letter names and sounds and less influence on phonological awareness. A second explanation consistent with the first, is that all children in this study, regardless of group, were at a developmental period where phonological awareness was just beginning to develop and the rapid growth experienced between the two post-test points was simply a matter of natural development. In any account, phonological awareness in this study presented a challenging finding that requires further investigation.

The results here hold important implications for research, policy, and practice around supporting young vulnerable learners and their families. First, it is important to recognize that young children demonstrating lower emergent literacy skills at the end of their junior kindergarten year are particularly vulnerable to the summer learning loss phenomenon. As such, it is important that school boards and community agencies consider how to most effectively support vulnerable children over the summer vacation months. The results of this study imply that summer family literacy programs could play an important role in eliminating the summer learning gap. The results of this study also demonstrate that the gains achieved as a result of such programs will be sustained throughout the school year.

There are a number of limitations and future directions associated with the current study. First, is the relatively modest sample size. The purpose of the current study was to explore the effectiveness of a summer family literacy program in order to specify the most important variables related to developing an effective program. By limiting the sample size, the research team was able to provide one-to-one attention to each participating child – an important tenet of effective remedial instruction. However, to further establish the generalizability of such a study, it would be prudent for future research to include a larger sample of participants. The second limitation stems from the fact that children encountered a variety of different educational experiences between when the program ended (post-test) and December post-test. It was not within the scope of the current study to measure these educational experiences. Future research would benefit from a qualitative account of what children experienced in their kindergarten year. In addition, future research would also benefit from qualitative commentary from caregivers in regards to how they engaged with children after the completion of the intervention program.

The results of the current study were promising. In general, children participating in the summer family literacy program did not experience a summer learning loss. Instead, compared to children who did not participate in the summer intervention program, program participants experienced gains in all of the emergent literacy skills measured in the study. Furthermore, these gains were sustained as children progressed into their kindergarten year.

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