

An Evaluation of an Early Years Literacy Instructional Program

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Abstract

This evaluation experimentally examined whether a pre-school literacy program improved school readiness. Children in child care centres were randomly assigned to instruction and control groups and were assessed before and after the literacy program using six outcome measures. The results showed a significant interaction effect for group assignment for five of the six outcome measures and the instructional group scored higher than the control group on the measures. The control group also showed gains from pre-test to post-test for three of the measures. Recommendations for programming included expanding the program to more childcare centres. Recommendations for future research centred on a formative evaluation of the program, and tracking the progress of the instructional and control students over time.

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Executive Summary

Purpose

The purpose of this research project was to determine whether an early educational intervention for children 3 to 4 years of age will improve their school readiness upon entering the elementary school system at the Kindergarten level. The study focussed on the research priorities of school readiness in literacy through the development and implementation of an innovative early childhood language learning program called the Phonemic and Phonics Instructional Program (PIIP) in selected childcare centres in Ontario, Canada. The program was evaluated to demonstrate its capacity to improve early learning. The primary research question was to determine whether a scientifically based language development instructional program will improve school readiness by producing higher scores on school readiness instruments in the specific knowledge areas of identifying letters of the alphabet and attaching sounds to letters for children aged 3+ years entering an elementary school program.

Implementation

We created a language instructional program and administered it to a sample of children in childcare centres. We conducted a randomized control trial to measure learner performance using outcomes measures from the Strategic Teaching and Evaluation of Progress (STEP) literacy assessment as developed by the Center for Urban School Improvement (USI) at the University of Chicago. The outcome measures included Name Assessment (NA), Upper Case Letter Identification (UCLI), Lower Case Letter Identification (LCLI), Lower Case Sound Identification (LCSI), Rhyming Words (RW) and Matching First Sounds (MFS).

Findings

The results showed a significant interaction effect for pre-post and group assignment for five of the six outcome measures; namely, UCLI, LCLI, LCSI, RW and MFS. This implies that group membership had a significant influence on the outcome scores. The instruction group scored higher than the control group on all five of the abovementioned measures. We should note that the control group also showed significant gains from the pre-test to post-test for NA, UCLI, and LCLI.

Conclusions and Recommendations for Programming and Future Research

The findings led us to conclude that the PPIP has the potential to improve school readiness by producing higher scores on school readiness instruments in the specific knowledge areas of identifying letters of the alphabet and attaching sounds to letters and words for children aged 3+ years who are about to enter an elementary school program. Further, the program is easy to deliver and can be implemented by an instructor with little or no formal instructional training. Given this, the program should be made available to all child care centres in Canada and to any other pre-school programs that serve children in the targeted age group.

The findings of the evaluation also suggest a number of options for future research. It would be useful to replicate this study with a larger sample and include a formative evaluation of the program across a range of child care centres. The larger sample would provide more confidence regarding the impacts of the program and would allow for an investigation of differential program effects among subgroups of children. The formative evaluation would also uncover issues related to the program's content and delivery. Ultimately, this would help improve the program's impact. A second study that tracks the progress of the instructional and control students into Kindergarten, and Grades 1 and 2 would further clarify and confirm its impact and value in the longer term.

1.0 Rationale

One in five children in North America show signs of an emotional or behavioural problem according to the Offord Centre for Child Studies (2008). Many of these children have more than one problem, including poor school performance and learning disabilities. The Ontario Child Health Study (Boyle, 1992) provided some insights into the health of young people, demonstrating that there is a close relationship between children's emotional and behavioural problems, the need for professional help and poor school performance.

This research focused on improving a child's school readiness by enhancing their language and cognitive skills prior to entering Kindergarten. The focus on language skills stems from The National Assessment of Education Progress (NAEP) in the United States. The NAEP tested children in each grade level to understand how many of these children were reading at or below a level considered standard or proficient for that grade. They provided evidence that a problem exists in the domain of language and cognitive skills of school age children. In a 1998 survey, the NAEP found that 69% of fourth graders and 67% of eighth graders were reading below proficiency levels. In fact, 38% of fourth graders had not achieved even basic or rudimentary skills in reading (Shaywitz, 2004).

Further, improving the language skills and the school readiness of all children increases the probability of positively impacting on their school performance. Improved school readiness should result in improved school performance and reduce the emotional toll on the individual. If a child is meeting with success in the Kindergarten and grade one classroom, the stress they otherwise would have felt should be greatly mitigated as a result of this early intervention. According to the Offord Centre for Child Studies (2008), the emotional toll on the individual, the family and society, as well as the economic costs of providing special education, legal services, social services and clinical instructions is immeasurable. Reduce the 'problem' of poor school performance, and you will reduce the number of children in North America who show signs of an emotional or behavioural problem (Offord Centre for Child Studies, 2008).

Indicators of a child's school readiness include the ability to identify letters of the alphabet, attach sounds to letters, read simple words, read complex words and read simple sentences. To demonstrate some level of competence in these areas, children would require exposure to language learning at various points in time during their early years prior to entering Kindergarten. This would call for a pedagogically sound educational intervention.

2.0 The Early Years Instructional Program

The instructional program created for this project has been called the Phonemic and Phonics Instructional Program (PIIP). The foundations of the PIIP are based on the findings and conclusions of the 2000 report from the National Reading Panel, *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implication for Reading Instruction*. The National Reading Panel (2001) was mandated to help parents, teachers, and policymakers identify key skills and methods central to reading achievement. The Panel was charged with reviewing research in reading instruction and identifying methods that consistently relate to reading success. The Panel reviewed over 100,000 studies, and drew out only those that met rigorous criteria related to the effectiveness of the educational program or approach. The work of the Panel focused on a “what works” basis, and helped lay a foundation for instructional programs based on scientific evidence.

The Panel came to several conclusions, two of which are particularly relevant to the PIIP. The first is that phonemic awareness is important because it improves children’s word reading and reading comprehension, and it helps children to spell. The second is that phonics instruction is important because it leads to an understanding of the alphabetic principle – the systematic and predictable relationships between written letters and spoken sounds.

The PIIP incorporates key phonemic and phonics best practices instruction identified by the NRP study (2001) into its design. First, it is multi-sensory in its approach, incorporating body movements, with sight and sound activities. Second, the program uses a systematic approach to learning, and presents concepts in a logical order. Material is presented in a sequential manner and as the program content deepens, it builds on previously learned concepts. Third, the instruction is highly structured, and relies on a group of core activities that are repeated throughout all of the lessons. Finally, the instruction is explicit, in that precise directions are provided for each instructional activity, ensuring consistency in its application from one instructor to another, yielding consistent results across settings. Each of these features will be discussed in greater detail below.

2.1 Multi-Sensory Approach

The program employs a multi-sensory approach to learning. Throughout the program, students are given the opportunity to trace letters with their fingers on activity sheets, use their whole arms to skywrite letters or whole body to make the shapes of letters. When reviewing key letter sound relationships, they are encouraged to trace the letters on their desks, continuously reinforcing the symbol/sound relationship on a daily basis through physical movement. This results in a combination of sound, sight and body movements that work together to form the neural circuitry that embeds the sound and symbol relationship in their brain.

Furthermore, cursive writing is incorporated into this program and provides students with the opportunity for exposure to this skill at an age earlier than would normally be possible. Children at a young age are better at making curvilinear movements than straight lines. Scribbling comes naturally to them. Forming the cursive letter ‘a’ is much easier than forming the straight lines of a manuscript letter ‘A’. This program allows cursive writing to be introduced in a slow incremental manner. The large, gross motor body movements that accompany the introduction of a letter sound relationship are very deliberate in their execution. They are executed in the air, and not on paper, providing ample opportunity to rehearse the movements before the children transfer these movements to pencil and paper print activities.

2.2 Incremental Approach

The program is incremental in its approach to knowledge acquisition, always building on the knowledge gained from the previous instructional unit. Review and repetition are incorporated throughout the entire program. It is fast paced and fun. Children quickly learn the routine. The program targets 26 letters presenting 26 sounds.

2.3 The Program Design

A Teaching Guide was created and divided into 40 instructional units. As stated, the instructional approach was scripted, highly structured, multi-sensory and simple to implement. A template approach was used in the design of each instructional unit. The first instructional unit had the least number of activities. These activities appeared on all subsequent instructional units, but were adapted to suit the new sounds being presented. As the program progressed and new instructional units were introduced, the variations of sound combinations allowed for new sets of activities to be added to each instructional unit. By following a scripted instructional format, instructors were working with the same activities for each instructional unit. Consistency of program implementation was ensured by designing simplicity into each activity and by the repeated use throughout each instructional unit. As instructors progress through the program, their experience and comfort level increased for each activity.

PPIP incorporated the key findings from the scientific research (NRP 2001) on phonemic awareness instruction. Effective phonemic awareness instruction teaches children to notice, think about, and work with (manipulate) sounds in spoken language. PPIP used the following activities to build phonemic awareness into its design:

Phoneme isolation

Children recognize individual sounds in a word.

Teacher: What is the first sound in van?

Children: The first sound in van is /v/.

Phoneme identity

Children recognize the same sounds in different words.

Teacher: What sound is the same in fix, fall, and fun?

Children: The first sound, /f/, is the same.

Sample Instructional Unit Activities

- Identification of new letter sound in orally presented words (phoneme identity/phoneme isolation).
 - Words are spoken orally to students to introduce them to a similar sound at the *beginning* of each word

- Word List
 - A list of words is read aloud and students repeat the word and identify the letter sound at the *beginning* of the word (phoneme identity/phoneme isolation).
 - A list of words is read aloud, and the students must identify the word that *starts* with a different sound (Phoneme isolation)
- Letter and letter sound introduction – Key Word Cards (phoneme identity/phoneme isolation).
 - The same words are presented through the use of a picture through the presentation of Key Word Cards that connect a picture and a specific focus letter to the words presented in the previous activity.
- Keyword Card Review (phoneme identity/phoneme isolation)
 - At each subsequent instructional unit, all of the previously presented Key Word Cards are reviewed with the students.
- Pick out the Sound

The instructor pronounces sounds, one of which is the target sound of the lesson, and the students raise their hands when they hear that sound. (phoneme identity)

As mentioned, the program was divided into 40 units. A single unit was delivered each day from Monday to Friday. The program was implemented over a 40 day period or eight weeks. Extra time was allotted for each site in cases where the program could not be implemented on a given day as a result of high absenteeism, statutory holidays, etc. The program was implemented in the same setting that children normally received any other instruction. All necessary materials were provided by the project team which included the Teacher's Guide (Appendix A), activity sheets, key word cards and picture cards.

3.0 Evaluation Design and Methodology

3.1 Key Study Question

Given the above rationale and program description, the research team designed an evaluation of the PPIP to answer the following question:

- What is the impact of an experimental language development instructional program on measures of pre-reading literacy in pre-Kindergarten children?

3.2 Research Design

The research design was a randomized control trial over the treatment implementation period. Children in childcare centres were random assignment to treatment (PPIP instruction) or control (no instruction) groups within each centre. This level of assignment helped to establish causality by eliminating the threat that childcare factors could potentially contribute to differences between treatment and control groups. Since treatment and control groups were within the same childcare centre, childcare level explanations of differences were eliminated. Another reason for within childcare assignment is that it increased the likelihood that treatment and control groups would possess similar characteristics at the onset of the study and therefore enhance comparability.

3.2.1 Recruitment of Childcare Centres

Childcare Centres were recruited based on their willingness to participate in the study and their ability to provide a sufficient number of participants to create both a treatment and a control group. Within the above constraints, centres were also selected to reflect as best as possible urban, suburban and rural areas, and low/high income areas. Additional criteria included not having other major learning initiatives at the centre, and that the centre had relatively high attendance and historically low child mobility rates. The recruitment of childcare centres began in April, 2007 and was completed in June, 2007.

A PPIP Coordinator was hired. Subsequent to this, the coordinator created an information sheet containing a brief description of the project and a registration form (Appendix B).

Several major childcare centres in the Cornwall, Ontario, Canada area were contacted and visited by the PPIP coordinator. Other childcare centres in the Cornwall area were also

contacted by phone and e-mail. After screening, four Cornwall childcare centres registered. Childcare centres in the neighbouring Stormont, Dundas and Glengarry counties were also contacted by phone and sent information and registration sheets via e-mail. Two childcare centres registered from these counties. Subsequently, childcare centres in the Brockville and Lanark area were also contacted and two centres from Lanark County registered.

The Coordinator also approached a private sector childcare company with centres across Canada. Following contact by phone and e-mail, and after screening, 12 childcare centres registered from Eastern Ontario, two from Alberta, 12 in Toronto and two in Waterloo. All participating childcare centres were given an honorarium for participating in the study. Additionally, the principal assessor at each participating centre also received an honorarium for their contribution to the study.

When program implementation began in mid January, 2007, there were 28 confirmed sites, with 394 potential children. The Coordinator intentionally over recruited in anticipation of site attrition, and to compensate on overestimates by the sites for the total number of children available to participate in the study. Funding for assessor honorariums placed limits on the total number of children the coordinator could recruit. Funding allowed for the assessment of a maximum of 375 children. Instructional materials were sent to all 28 sites prior to the implementation of the program. On January 1st, 2007 the private sector childcare company announced that five of its sites were no longer participating in the study. Two other sites also declined to participate due to reasons beyond their control (e.g., staff turnover, illnesses). During the implementation, four sites failed to fully implement the program for similar reasons cited above. This left 17 sites that were able to provide data for the study. By the end of the study, four additional sites reported that they could not provide post-test data on the children. The reasons given were staff turnover or lost score sheets. This reduced the total number of participants in the study. Given all the confirmed sites had received instructional materials, limited funding for printing of additional instructional materials also hampered our ability to recruit more sites. Furthermore, it was impossible to recruit additional sites as the mid-January start date was a key requirement for the implementation of the program, given the children participating in this study were entering elementary school programs in September.

3.2.2 Instructor and Assessor Training

Each centre received a complete package of instructional and assessment materials, as well as explicit instructions that clearly defined expectations, training requirements, and implementation start/end dates.

3.2.3 PPIP Instructor Training

A training CD-ROM containing a 20 minute training video was created and included with the package. In order to familiarize themselves with the contents of the instructional program, instructors were asked to review the training video. It covered all of the components of the program, explained their purpose, and demonstrated how to implement them. Everything instructors needed to know about how to implement the instructional program was included in this video.

3.2.4 PPIP Assessor Training

Assessors also received a DVD which described the use of the assessment materials and showed an assessor doing the assessments. In addition, assessors received an assessor's manual that described the following in detail:

1. How to select children who will and will not receive the literacy training
2. Parental consent forms
3. Doing the assessments
4. Detailed administration instructions
 - 4.1.1. Viewing the DVD
 - 4.1.2. Practicing
 - 4.1.3. Preparing for the assessment
 - 4.1.4. When to assess the children
5. Completing the child profile form
6. Completing the instructor and assessor profile forms
7. Completing the child care centre profile form
8. Organizing the assessments
9. Entering the assessment results on the web

To avoid repetition, the reader is strongly encouraged to reference Appendix C where the above nine points are described in great detail. Further information about the above mentioned forms (items 5, 6 and 7) are provided in the measures chapter (Chapter 4).

3.3 Implementation

As stated, the training and assessment materials were mailed or couriered to the centres in December, 2007. The centres were asked to implement the assessments and programs starting the third week of January, 2008 and conclude in the first week of March, 2008. Within each centre, children in the target age range were randomly assigned to treatment (received the PPIP) or control (received no instruction). The table below displays the timing of the implementation.

Table 1 Implementation Timing

Task	Time
Pre-Assessment	Week of January 13, 2008
Instruction Begins	Week of January 20, 2008
Instruction Ends	Week of March 9, 2008
Post Assessment	Week of March 16, 2008

3.3.1 Fidelity of Implementation

As stated above, consistency of the instructional program implementation was ensured by designing simplicity into each instructional activity and by the repeated use of the activity throughout each instructional unit. As instructors progressed through the program, their experience and comfort level increased for each activity.

The assessments were quick and easy to administer. This was one of the main criteria used in their selection. The study team also added assessment administration steps taken from other assessment tools found in the literature (DIEBELS) to enhance the fidelity of the assessments. This involved having a neutral third person observe the assessor doing the assessments and rate and correct their performance according to a pre-determined checklist (Appendix C – Assessment Quality Checklist).

The ease of use was combined with ongoing support and monitoring throughout the delivery of the program. All centres were contacted by phone and email on a regular basis to monitor their progress, and assess and deal with any implementation problems they were having. The Child Care centres were instructed to report back to the PPIP coordinator at the mid and end points of program delivery. This also ensured compliance with the program implementation timelines.

3.3.2 Recording the Assessment Results

As stated above, forms were provided for the recording of outcome measures and other data (see the Measures chapter). Rather than have the childcare centres fax/mail the completed forms, the project created web-based data entry tools using an internet based survey development and data collection company. Web-based data entry templates were created for all of the outcome measures and other project data collection forms. Childcare centres entered their data on a password protected web site.

4.0 Measures

4.1 Assessments

Criteria for designing outcome measures to be used for monitoring literacy progress of children have been described by Stanley Deno and his colleagues (Deno, Mirkin, & Chiang, 1982). Individual growth and development indicators should be evaluated according to six broad characteristics. These include the degree that they: (1) measure important outcomes for children; (2) can be used efficiently and economically; (3) are standardized and replicable; (4) rely on generalized or “authentic” child behaviours; (5) are technically adequate; and (6) are sensitive to growth and change over time and to the effects of intervention.

The review of the early literacy assessment literature uncovered a plethora of instruments that measure the literacy progress of children. A sampling is listed in Table 2. This provided somewhat of a challenge in selecting instruments that were appropriate for this study. Given this, the research team developed an enhanced set of criteria that reflected the characteristics above and considered the unique nature of and context within which the PPIP was being delivered.

The criteria applied to the primary outcomes measures for this study included the degree that they: (1) measured outcomes that reflected the PPIP instructional objectives; (2) were easy and quick to administer, given the range of childcare settings and assessors’ experience; (3) were standardized and replicable; (4) relied on generalized or “authentic” child behaviours; (5) were age-appropriate; (6) were psychometrically sound; (7) were sensitive to growth and change over time and to the effects of the intervention; (8) provided adequate support materials and clear administration instructions to the assessors; and (9) were able to be used within the study’s financial resources.

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Table 2 Pre-Kindergarten and Kindergarten Emergent Literacy Skills Assessments

This listing is adapted from a summary of standardized assessments contained within the document Standardized Assessment of Children's Emergent Literacy Skills by Christopher J. Lonigan, Kimberly D. Keller and Beth M. Phillips, in B. Wasik (Ed.), (in press) Handbook on family literacy: Research and services. Mahwah, NJ: Lawrence Erlbaum Associates. The initial summary was prepared by the Florida Center for Reading Research (FCRR).

Name of Assessment	Appropriate Age/Grade	Uses		Psychometrics		Administration Time	Major Components Assessed			
		Screen	Diagnosis	Reliability	Validity		Oral Language Vocabulary	Print/Letter Knowledge	Phonological Awareness/Processing	Basic Concepts
(BBCS-R) Bracken Basic Concept Scale - Revised	Ages 2-6 to 8-0	X Ages 5-7 only	X	.47-.98 ^a .67-.98 ^b	.68-.88 ^c	30 min.				X
(Boehm-R) Boehm Test of Basic Concepts- Revised	Grades K-2	X		.77-.87 ^a .85-.88 ^b	--- .58-.64 ^d	30 to 40 min.				X
(CELF-P) Clinical Evaluation of Language Fundamentals - Preschool	Ages 3-0 to 7-11	X	X	.49-.93 ^a .60-.97 ^b	.31-.93 ^c	30 to 45 min.	X	X		
(CTOPP) Comprehensive Test of Phonological Processing	*Ages 5-0 to 6-11		X	--- .68-.97 ^b	.25-.74 ^c .42-.71 ^d	30 min.				X
(DIBELS) Dynamic Indicators of Basic Early Literacy Skills	Grades K-3	X		.72-.97 ^b	.36-.79 ^c	1 to 5 min.				X
(DSC) Developing Skills Checklist	Grades PreK to K		X	.81-.92 ^a ---	.41-.57 ^c ---	10 to 15 min.			X	
(EOWPVT-III) Expressive One-Word Picture Vocabulary Test	Ages 2-0 to 18-11		X	.93-.95 ^a .88-.89 ^b	.64-.71 ^c	10 to 15 min.	X			
(LAC) Lindamood Auditory Conceptualization Test	**Developmentally Appropriate	X	X	.96 ^a	.68-.75 ^c .88-.981 ^d	10 min.				X

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Name of Assessment	Appropriate Age/Grade	Uses		Psychometrics		Administration Time	Major Components Assessed				
		Screen	Diagnosis	Reliability	Validity		Oral Language Vocabulary	Syntax	Print/Letter Knowledge	Phonological Awareness/ Processing	Basic Concepts
(OWLS) Oral Written and Language Scales	Ages 3-0 to 21-11	X	X	.84-.91 ^a .80-.89 ^b	.46-.91 ^c	20 to 30 min. per subscale	X	X			
(PALS-PreK) Phonological Awareness and Literacy Screenings- PreK	Ages 4-0 to 6-11	X		---	.70 ^c ---	10 to 15 min.			X		X
(PAT) Phonological Awareness Test	Ages 5-0 and older		X	.72-.96 ^a .45-.98 ^b ---	Contrasted groups	40 min.				X	X
(PLS-IV) Preschool Language Scale - Fourth Edition	Ages 2 wks to 6-11		X	.85-.94 ^a .82-.94 ^b	.66-.88 ^c	15 to 40 min.	X	X			
(PPVT-III) Peabody Picture Vocabulary Test	Ages 2-6 to 90-0	X		.92-.95 ^a .90 ^b	.63-.92 ^c	11 to 12 min.	X				
Rosner Test of Auditory Analysis	Ages 5-11		X	---	---	5-10 min	X		X		X
(Pre-CTOPPP) Preschool Comprehensive Test of Phonological and Print Processing	Ages 3-0 to 5-11		X	.57-.89 ^a .50-.89 ^b .89-.94 ^a	.41-.43 ^c ---	30 to 45 min.	X			X	X
(ROWPVT-III) Receptive One-Word Picture Vocabulary Test	Ages 2-0 to 18-11		X	.95-.97 ^a .80-.89 ^b	.50-.83 ^c	10 to 15 min.	X				
(STEP) Strategic Teaching and Evaluation of Progress	Ages 4-8			.85-.98	.51-.62	10 min	X		X		X
(TERA-3) Test of Early Reading Ability - 3	Ages 3-6 to 8-6		X	.82-.95 ^a .86-.99 ^b	.34-.98 ^c	15 to 45 min.	X				
Test of Invented Spelling	Ages 5	X	X	--	.61-.68	10 min	X		X		X

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Name of Assessment	Appropriate Age/Grade	Uses		Psychometrics		Administration Time	Major Components Assessed			
		Screen	Diagnosis	Reliability	Validity		Oral Language	Print/Letter Knowledge	Phonological Awareness/ Processing	Basic Concepts
(TOLD-P:3) Test of Language Development - Primary: 3rd Edition	Ages 4-0 to 8-11	X	X	.81-.96 ^a .77-.92 ^b	.52-.97 ^c	30 to 60 min.	X	X		
				.89-.94 ^a .77-.87 ^b	.65-.78 ^c				X	
(TOPA) Test of Phonological Awareness	Ages 4-7		X	.77-.94	.62-.66	15-20 min	X			X
(WJ-III) Woodcock-Johnson III Tests of Cognitive Abilities and Achievement	Ages 2-0 to 90-0		X	.82-.98 ^a .57-.77 ^b	.46-.49 ^c	2 to 10 min. per subtest			X	
(WRMT-R) Woodcock Reading Mastery Tests-Revised	Ages 5-0 and older		X	.94-.99 ^a	---	15 min.			X	
Yopp-Singer Test of Phoneme Segmentation	Ages 5-6	X	X	.95	38-.78	5-10 min	X		X	X

Note. * Two versions of the CTOPP are available. Version 1, listed above, is designed for ages 5 to 6. Version 2, recommended for ages 7-24, is not listed.

** The LAC is suitable for administration at any age for individuals who understand the concepts of sameness and difference, numbers to four, and left-to-right progression.

ⁱinternal consistency reliability; ^btest-retest reliability; ^cconcurrent validity; ^dpredictive validity.

4.1.2 PPIP Instructional Objectives

Considering the first criteria, the central instructional program objectives of the PPIP are stated below.

Phonemic Awareness

Children will be able to hear and identify individual sounds – phonemes – in spoken words. More specifically, they will be able to:

- Identify the letter sound at the beginning of a word, from a list of four orally presented words in the initial position of a word, e.g., pit, pig, pat, poke = /p/.
- Recognize a letter sound at the beginning of a word that is different from a list of orally presented words, e.g., dog, dice, cat, dance.
- Identify and say the first sound of an orally presented word, e.g., what is the first sound you hear at the beginning of the word dog? The sound is /d/.

Phonics

Children will be able to recognize the relationship between written letters and spoken sounds. They will be able to:

- Identify the correct written letter on a sheet of paper from an orally presented letter sound, e.g., teacher says /k/ and student can identify the letter ‘c’.
- Name the correct letter sound when shown a letter written on a sheet a paper, e.g., teacher shows the letter ‘c’ and student says the sound /k/.

Given these objectives, the most promising tools that emerged were those that measured phonics and phonological awareness associated with early literacy development (Letter/Name Sound Identification , Rhyming and Alliteration). These are discussed below.

4.2 Letter Name and Letter Sound Identification

In general, letter name identification requires children to provide the names of both upper and lower case letters. A page of upper and lower case letters are shown to children and they are asked to point and say the name of each letter. They are asked to go to the next letter if it takes more than five seconds to say the letter.

A second task is the pronunciation of sounds associated with letters. To be successful the child must have an awareness of individual phonemes and their association with letters. Using lower case letters, the letter sound identification task asks children to touch each letter and say the sound it represents. The child is asked for the alternate sound for a letter that has two (or more) sounds.

These two assessments provide a sense of a child's alphabet recognition and the sounds associated with letters.

4.2.1 Letter Name and Letter Sound Identification: Psychometric Properties

Letter sound fluency instruments have reliability coefficients ranging from .80 to .90 for alternate-forms reliability and test-retest in Kindergarten and first grade (Elliott, Lee, & Tollefson, 2001; Fuchs & Fuchs, 2004; Speece & Case, 2001). They also show concurrent and predictive criterion-related validity ranging from .50 to .90 (with word reading).

4.3 Rhyming

In general, a rhyming assessment presents a child with a series of cards. Each card shows four pictures: one of the pictures is the stimulus word (e.g., dog) and shown with the stimulus picture is a set of three other pictures (e.g., can, pants, log) with one correct and two incorrect responses. For each card the examiner points to and says the name of each picture and asks the child to, "Please point to the picture that sounds the same as the top picture." After a demonstration and practice items, the assessor shows a random selection of cards. The child's score is the number of correctly-identified rhymes.

4.3.1 Rhyming: Psychometric Properties

Test-retest reliability for Rhyming (over three weeks) is $r = .83$ to $.89$, $p < .01$ from a study of 42 preschoolers (Missall and McConnell, 2004).

Other standardized measures of phonological awareness and early literacy development correlate with rhyming. In a longitudinal research study (McConnell, Priest, Davis, & McEvoy, 2002), Rhyming was positively correlated with the PPVT-3 ($r = .56$ to $.62$, $p < .05$), Concepts About Print (CAP; Clay, 1985; $r = .54$ to $.64$, $p < .01$) and Test of Phonological Awareness (TOPA; Torgeson & Bryant, 1994; $r = .44$ to $.62$). With respect to concurrent validity, moderate to high correlations were found with Picture Naming IGDI ($r = .46$ to $.63$, $p < .01$) and Alliteration IGDI ($r = .43$; Missall, 2002).

Rhyming's concurrent validity with DIBELS Letter Naming Fluency is $r = .48$ to $.59$ and Onset Recognition Fluency $r = .44$ to $.68$ for children in preschool (McConnell et al., 2002; Missall, 2002).

4.4 Alliteration

Alliteration assessment also uses stimulus cards. The cards again depict pictures: one of the pictures is a stimulus word (e.g., log) and shown with the stimulus picture is a set of three other pictures (e.g., lamp, cup, boat) with one correct and two incorrect responses. The child is asked to, "Please look at the pictures and find the ones that start with the same sound." For each card the examiner names all the pictures. After a demonstration and practice items, the assessor shows a selection of cards, counting the number correct as the child's score.

4.4.1 Alliteration: Psychometric Properties

Test-retest reliability over three weeks was $r = .46$ to $.80$, $p < .01$ for a sample of 42 preschool-aged children (Missall and McConnell, 2004).

Alliteration also has correlations with other standardized measures of phonological awareness and early literacy development. In longitudinal research (McConnell, Priest, Davis, & McEvoy, 2002) alliteration was correlated with the PPVT-3 ($r = .40$ to $.57$, $p < .01$), TOPA ($r = .75$ to $.79$, $p < .01$), and CAP ($r = .34$ to $.55$, $p < .05$). Alliterations concurrent validity with DIBELS Letter Naming Fluency is moderate to high ($r = .39$ to $.71$, $p < .05$). (McConnell et al., 2002; Missall, 2002).

4.5 Strategic Teaching and Evaluation of Progress (STEP) Literacy Assessment

After reviewing the literature, identifying the generic nature of the assessments, and determining their psychometric properties, the study team chose to use the Strategic Teaching and Evaluation of Progress (STEP) literacy assessments as developed by the Center for Urban School Improvement (USI) at the University of Chicago in collaboration with affiliated USI teachers.

The assessments provide:

A set of tools, tightly aligned with scientifically established milestones in reading development, to follow students' progress from pre-school/Kindergarten through third grade. The tools are organized into a developmentally sequenced set of tasks that help teachers understand the developmental status of individual students and a class as a whole at any given point, and to analyze their progress over time. The assessments are woven into classroom practice as an integrated part of literacy instruction rather than a separate activity that is external to teaching.

(Kerbow & Bryk, 2004: 1).

Further details regarding the STEP approach to literacy training and assessment can be found in (Kerbow & Bryk, 2004).

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The STEP assessments were chosen because they were the best match with the assessment criteria developed for this study. The assessments: (1) measured outcomes that reflected the PPIP instructional objectives; (2) were easy and quick to administer; (3) were standardized and replicable; (4) relied on generalized or “authentic” child behaviours; (5) were age-appropriate; (6) were psychometrically sound; (7) were sensitive to growth and change over time and to the effects of intervention; (8) provided adequate support materials and clear administration instructions to the assessors; and (9) were able to be used within study financial resources.

Not only was the cost of the STEP assessments within study resources but they also provided support materials and explicit administration instructions, including a video depicting how the assessments were to be administered. This was a critical decision factor, given that the assessments would be done across a range of childcare settings and assessor experience. Further, as mentioned, the study team also added assessment administration steps taken from other assessment tools found in the literature (DIEBELS) to enhance the fidelity of the assessments.

The specific STEP assessments used in this study were:

Name Assessment: The child is asked to write out their first and last name as best as they can. After this, they are asked to show the first and last letters in their name by answering: Where is the “m” in your name?; Where is the “b” in your name?; and so on. The child is given a score from one to five according to the scoring rubric provided.

Letter and Letter Sound Identification: The child is shown a piece of paper with upper case letters on it and then one with lower case letters on it. For both upper and lower case letters, the child is asked to name the letter. After naming all the lower case letters, and if the child obtains 15 or more letter names right, the child is asked to say the sound the letter makes. The child’s score is the number of letter names and sounds she/he gets right.

Rhyming Words: The child is shown a picture, for example, the picture of a mouse. She is then shown three new pictures. The child is asked to point to the picture that sounds the same as “mouse” (e.g., house). The child’s score is the number of times she identifies the correct picture. Two series of 10 pictures were used to increase the number of items and the reliability of the assessments.

Matching First Sounds: The child is shown a picture, for example, the picture of a cat. He is then shown three new pictures. The child is asked to point to the picture that starts with the same sound as “cat” (e.g., cake). The child’s score is the number of times he identifies the correct picture. Again two series of 10 pictures were used.

4.5.1 STEP Scales: Internal Reliability

Another key factor in deciding on the use of STEP was the nature and findings of the reliability and validity study undertaken for the assessments. As stated by (Kerbow & Bryk, 2004):

STEP is designed to be used as a classroom-based assessment. It is intended for use by teachers and other school staff in the course of their daily practice. Therefore, we sought to establish reliability-in-use by collecting assessments administered by regular teachers in ordinary classrooms ...The reliability study results reported can best be described as an analysis of reliability in the context of regular school use in contrast to reliability established under more scientifically-controlled research settings. ...all of the assessment data were gathered by regular teachers and classroom assistants. While all had received the basic training in STEP administration, data collection occurred in regular classrooms within the context of normal day-to-day instruction. No special “testing conditions” were imposed for purposes of this study. As a result, we view the results reported as lower bound estimates given the highly variable conditions typically found in the disadvantaged urban school classrooms where these data were collected. If STEP were used in scientific studies under more standardized administration conditions (e.g. a quiet, secured space where

test administration would be unlikely to be interrupted by other classroom events), we would expect even more reliable results.

(Kerbow & Bryk, 2004: 60)

4.5.2 Reliability: Full Scale

The overall scale reliability coefficient (Cronbach's alpha) is 0.98. This implies that it has a high degree of precision in distinguishing among students K to 3 in their developmental reading state (Kerbow & Bryk, 2004).

4.5.3 Reliability: Scale Sub-Components.

The STEP sub-scales reliability is 0.96. The reliability for each of the two tasks is 0.95 for letter naming and 0.85 for letter sounds which combine to comprise this sub-scale (Kerbow & Bryk, 2004).

4.5.4 Diagnostic Reliability

STEP researchers also examined the reliability of the STEP assessment system at a more micro level consistent with how STEP information might typically be used by teachers within classrooms. They examined the ability of the instrument to discriminate possible task-level differences in performance for students who are thought to be at the same general developmental level. This reliability appears in Table 3. These results indicates “that STEP data are capable of informing relatively fine-grain teacher decision making based on observable differences in individual student performance at any given step level” (Kerbow & Bryk, 2004). Please see Table 3 – Pre-R – Step 1.

Table 3 Person Reliabilities for Adjacent Steps

Steps	
Administered	Reliability
<u>Pre-R – Step 1</u>	<u>.96</u>
Step 1-2	.96
Step 2-3	.96
Step 3-4	.91
Step 4-5	.87
Step 5-6	.92
Step 6-7	.83
Step 7-8	.87
Step 8-9	.84
Step 9-10	.84
Step 10-11	.88

Discussions with STEP personnel at the University of Chicago indicated that the Pre-R assessments used in this project were appropriate for the age of children in our study: namely children born in 2004 who would be turning four years of age in 2008 and are eligible to enter Junior Kindergarten in September, 2008.

4.6 Additional Questionnaires

The following three questionnaires collected additional information that would provide an expanded profile of the sample and/or had the potential to influence the outcome measures. Information was collected about the child, the assessor and instructor, and the childcare centre itself.

4.6.1 Child Profile Questionnaire

The Child Profile questionnaire provided additional demographic and other data for each child involved in the study. This information included the child’s age (in months), gender, whether English was the first language spoken in the home, prior literacy instruction, whether the child had special needs, and whether the child was in a subsidized childcare space. The

instrument also asked instructors to rate the verbal, writing and reading skills of the child prior to the instruction using a five point scale ranging from very low literacy skills to very high literacy skills for his/her age.

Although a psychometric study was not done on the questionnaire, consultation with the childcare professionals indicated that the questions were straightforward, unambiguous, and could be answered in a direct and reliable way.

4.6.2 Instructor/Assessor Questionnaire

On the assumption that characteristics of the instructors/assessors may influence the outcomes, each assessor completed an Assessor Questionnaire. The information collected using this questionnaire included assessor age, education, and years worked in childcare.

In addition, the research team felt that an instructor's/assessor's attitudes about the project and the project materials may influence the outcomes. Given this, instructor/assessors were asked about their attitudes towards the program's written materials, the literacy training and the project overall using a four point scale ranging from poor to excellent.

Instructors were further asked if they had ever provided formal instruction (like the instruction for this literacy training) to children before. Assessors were asked if they had ever done formal assessments (like the assessments for this program) of children before.

As above, a psychometric study was not done on the Assessor/Instructor Questionnaire. However, the childcare professionals again reported that the questions were straightforward, unambiguous, and could be answered in a direct and reliable way.

4.6.3 Childcare Centre Profile Questionnaire

The final questionnaire collected quantitative information about the child care centres. This included the number of children enrolled full-time (size), the number of children enrolled

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part-time, the number of children born in 2004, who turned four years of age in 2008 and were eligible to enter Junior Kindergarten in September, 2008, the number of children who were born in 2004, turned four years of age in 2008 and were eligible to enter Junior Kindergarten in September, 2008 who would be receiving the literacy training, and the number of children born in 2004, who turned four years of age in 2008 and were eligible to enter Junior Kindergarten in September, 2008 who would not be receiving the training. Please see Appendix C for the literacy outcome measures and the other questionnaires described above.

5.0 Results

5.1 Introduction

The following analysis consists of both descriptive procedures and a repeated measures multivariate analysis of variance. The data analysis provides a profile of the samples, assesses the equivalence of the instruction and control groups, investigates the differences between the responding and non-responding centres, and performs selected a priori correlations between the outcome measures and other variables of interest. The analysis is organized to answer the key evaluation question, “What is the impact of an experimental language development instructional program on measures of pre-reading literacy in pre-Kindergarten children?”.

5.2 Sample Description

5.2.1 Child Characteristics

The sample consisted of 113 children with an average age of 41.9 months (S.D. 3.45). With respect to gender, 53% of the sample was male and 47% female. For 69% of the sample, English was the first language spoken in the home. Over half of the sample (53%) was in subsidized child care spaces and slightly over 9% reported having special needs.

The child care personnel were asked to rate the child’s verbal, reading and writing literacy skills relative to other children their age. With respect to verbal skills, 36% of the sample was rated as low or very low, 40% as average and 24% as high or very high. For reading skills, 62% were rated as low or very low, 28% as average and 9% as high or very high. Finally, 76% of the sample was rated as having low or very low writing skills, 19% average and 5% high.

5.2.2 Instructor Characteristics

The majority of instructors were female (80%) with a mean age of 38.6 years (S.D. 9.43). They had worked an average of 16 years in childcare (S.D. 10.56). With respect to education, 70% reported receiving a post-secondary certificate or diploma and 30% a Bachelor’s degree. Among those who had received a post-secondary certificate or diploma, almost all reported it to be an Early Childhood Education Diploma (ECE).

5.2.3 Assessor Characteristics

All of the assessors were female with a mean age of 44.67 years (S.D. 10.71). They had worked an average of 20.22 years in child care (S.D. 11.44). A large majority of assessors (88.9%) reported having a post-secondary certificate or diploma, and in all cases this included an ECE.

Considering the assessments done in this study, 44% of the assessors reported having done similar assessments in the past. These included semi-annual developmental assessments of children within the childcare program, developmental screening and Conners' Teacher Rating Scale.

5.3 Equivalence of the Instruction and Control Groups

The treatment/instruction and control groups were compared with respect to their pre-instruction outcome scores and key demographic variables. There were no significant differences found between the instruction and control groups on the outcome measures. See Table 4 below for an outline of these results.

Table 4 Comparison of Instruction and Control Groups on Outcome Variables

Outcome Measures	<i>t</i>	Significance ¹
Name Assessment (NA)	1.52	.13
Upper Case Letter Identification (UCLI)	-0.09	.93
Lower Case Letter Identification (LCLI)	-0.73	.47
Lower Case Sound Identification (LCSI)	-1.28	.20
Rhyming Words (RW)	0.33	.74
Matching First Sounds (MFS)	0.23	.82

There were also no significant differences found for the children's age, $t = -0.68, p = .50$. With respect to gender, there were 18.9% more girls in the instruction group relative the control group, $\chi^2(1, N = 108) = 4.04, p = .04$. There were no significant differences with respect to English as the first language, $\chi^2(1, N = 108) = .52, p = .47$, prior literacy instruction, $\chi^2(1, N = 108) = .00, p = .95$, whether the child had special needs, $\chi^2(1, N = 108) = 0.83, p = .36$ or was in a subsidized child care space, $\chi^2(1, N = 108) = 0.06, p = .81$. Finally, there was a

¹ Two tailed - unequal variances assumed. Significance is determined as a minimum alpha of .05.

significant difference in the child care personnel ratings of the children's verbal literacy scores, $\chi^2(4, N = 108) = 10.53, p = .03$, with 15% more of the instruction group reported as having high or very high verbal literacy skills compared to the control group, but no significant difference for the rating of reading skill $\chi^2(4, N = 108) = 6.83, p = .15$ and writing skills, $\chi^2(3, N = 108) = 5.34, p = .15$. The instruction and control groups were equivalent except for gender and the verbal literacy skill ratings.

5.4 Sample Attrition

For the reasons outlined earlier, six child care centres provided pre-test results but did not record the post-test results for 55 children. These children were dropped from the analysis to provide the final sample of sample of 113 children profiled above. Independent t-tests on the outcome variables between participants with complete and incomplete data found no significant difference for all outcome variables except NA, $t = 2.54, p = .01$, and LCSII, $t = 2.74, p = .01$. In both cases, the group with missing data had higher pre-test scores. Further, 20% of the missing data group had received prior literacy instruction, $\chi^2(2, N = 162) = 21.89, p = .00$, did not have special needs $\chi^2(1, N = 162) = 3.85^2, p = .05$, and had 26% fewer children in subsidized spaces, $\chi^2(1, N = 162) = 10.54, p = .00$ compared to the non-missing group.

5.5 Correlations

In order to examine the relationships between the outcome variables and other data from the child profile and assessor/instructor questionnaires, a priori correlations were performed. Significant negative correlations were found between UCLI and gender³ $r(113) = -0.21 p < .05$, and between LCLI and gender, $r(113) = -0.20 p < .05$. Significant positive correlations were found between child care personnel ratings of verbal literacy and NA $r(108) = 0.40 p < .0005$, UCLI $r(108) = 0.26 p < .01$, LCLI $r(108) = 0.25 p < .01$, RW $r(108) = 0.44 p < .0005$, MFS $r(108) = 0.40 p < .0005$. Significant correlations were also found between personnel ratings of reading literacy and NA $r(108) = 0.32 p < .001$, UCLI $r(108) = 0.56 p < .0005$, LCLI $r(108) = 0.52 p < .0005$, RW $r(108) = 0.53 p < .0005$, and MFS $r(108) = 0.46 p < .0005$. Finally, significant correlations were also found between personnel ratings of writing literacy and NA

² Yates correction.

³ Male = 1, Female = 2

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$r(108) = 0.46$ $p < .0005$, UCLI $r(108) = 0.52$ $p < .0005$, LCLI $r(108) = 0.52$ $p < .0005$, RW $r(108) = 0.47$ $p < .0005$, and MFS $r(108) = 0.43$ $p < .0005$. Significant correlations were also found between assessor education and NA $r(108) = 0.38$ $p < .0005$, and assessor years in child care and NA $r(108) = 0.27$ $p < .01$.

5.6 Impact of the PPIP on Children

Evaluation of the impact of the PPIP on measures of pre-reading literacy for pre-Kindergarten children was assessed by analyzing the outcome measures (NA, UCLI, LCLI, LCSi, RW, MFS) in a Multivariate Analysis of Variance (MANOVA), repeated measures design with pre-instruction versus post-instruction as the within subjects factor and group assignment (instruction versus no instruction) and gender as the between subjects factors.

5.6.1 Name Assessment

With respect to NA, the MANOVA yielded a significant pre-post main effect, $F(1, 109) 22.91$, $p < .0005$, but an insignificant interaction effect for both pre-post and group assignment, $F(1, 109) 0.04$, $p = .85$, pre-post and gender $F(1, 109) 1.48$, $p = .23$, and pre-post, group assignment and gender $F(1, 109) 0.02$, $p = .88$. The NA score⁴ at post-test for the instruction group ($M = 1.31$, $SE = .192$) was significantly higher than the pre-test score ($M = .77$, $SE = .138$), ($F = 1, 109$) 13.33 , $p < .0005$. However, the NA score at post-test for the control group ($M = 1.01$, $SE = .206$) was also significantly higher than the pre-test score ($M = 0.51$, $SE = .148$), ($F = 1, 109$) 9.89 , $p < .01$. Figure 1 below displays the estimated marginal means for NA pre-post for the instruction and control groups. Both the instruction and control groups showed significant improvements on NA.

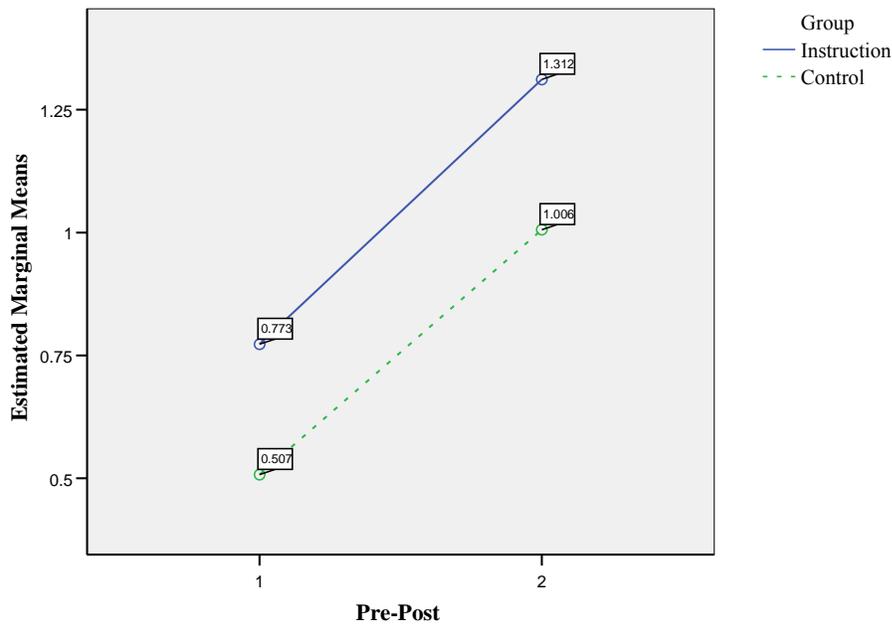


Figure 1. Estimated Marginal Means for NA

⁴ Score refers to average score.

5.6.2 Upper Case Letter Identification

With respect to UCLI, the MANOVA again showed a significant pre-post main effect, $F(1, 109) 46.86, p < .0005$, and a significant interaction effect for both pre-post and group assignment $F(1, 109) 4.73, p < .05$. There was no significant interaction effect for pre-post and gender $F(1, 109) .365, p = .55$, and pre-post, group assignment and gender $F(1, 109) .74, p = .39$. The UCLI score at post-test for the instruction group ($M = 11.95, SE = 1.28$) was significantly higher than the pre-test score ($M = 6.95, SE = 1.13$), ($F = 1, 109$) $43.83, p < .0005$. Again, the UCLI score at post-test for the control group ($M = 9.23, SE = 1.38$) was also significantly higher than the pre-test score ($M = 6.64, SE = 1.13$), ($F = 1, 109$) $10.18, p < .01$. Figure 2 again displays the estimated marginal means for UCLI pre-post for the instruction and control groups. Although both groups showed significant improvement in UCLI, the improvement was more prevalent for the instruction group.

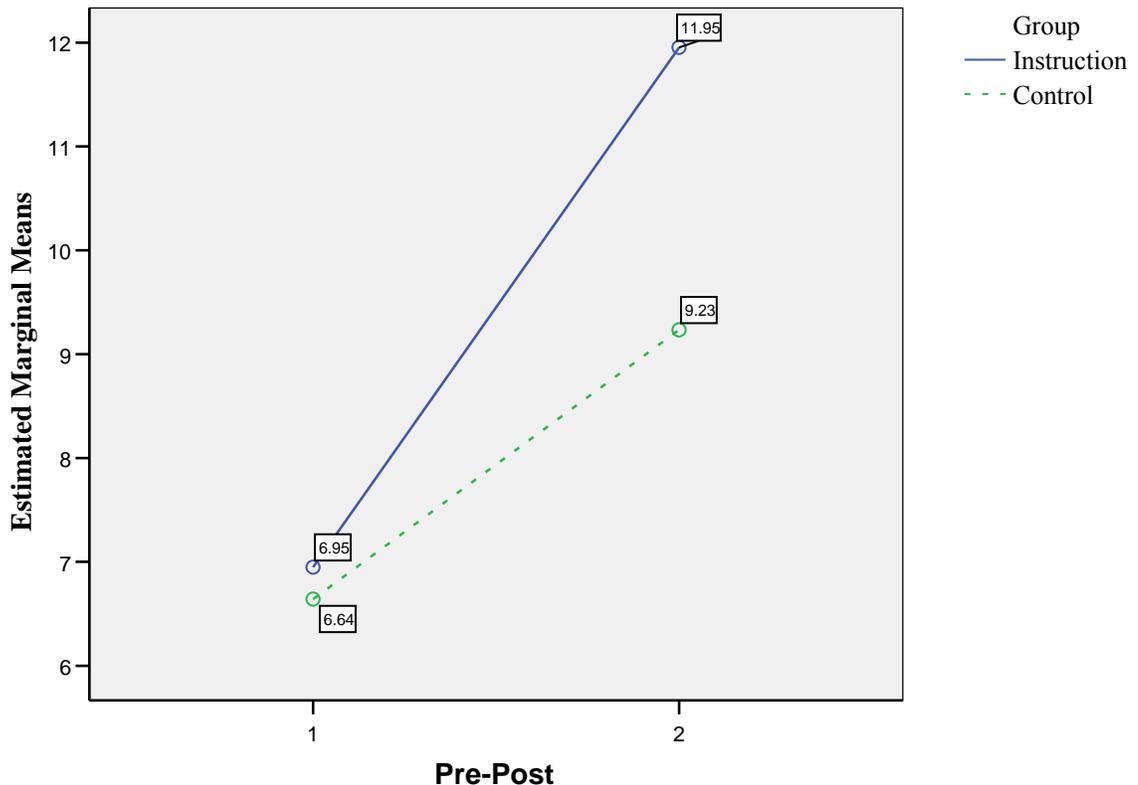


Figure 2. Estimated Marginal Means for UCLI

5.6.3 Lower Case Letter Identification

In analyzing LCLI, the MANOVA yet again yielded a significant pre-post main effect, $F(1, 109) 52.88, p < .0005$, and a significant interaction effect for both pre-post and group assignment $F(1, 109) 7.84, p < .01$. Again, there was no significant effect for pre-post and gender $F(1, 109) 0.01, p = .93$, and pre-post, group assignment and gender $F(1, 109) 0.14, p = .71$. The LCLI score at post-test for the instruction group ($M = 8.56, SE = 1.05$) was significantly higher than the pre-test score ($M = 4.05, SE = .880$), ($F = 1, 109$) $54.65, p < .0005$. Again, the LCLI score at post-test for the control group ($M = 6.63, SE = 1.13$) was also significantly higher than the pre-test score ($M = 4.62, SE = .946$), ($F = 1, 109$) $9.33, p < .01$. The pre-post estimated marginal means for LCLI are displayed in the figure below for the instruction and control groups. Although both groups showed significant improvement in UCLI, the improvement was again more substantial for the instruction group.

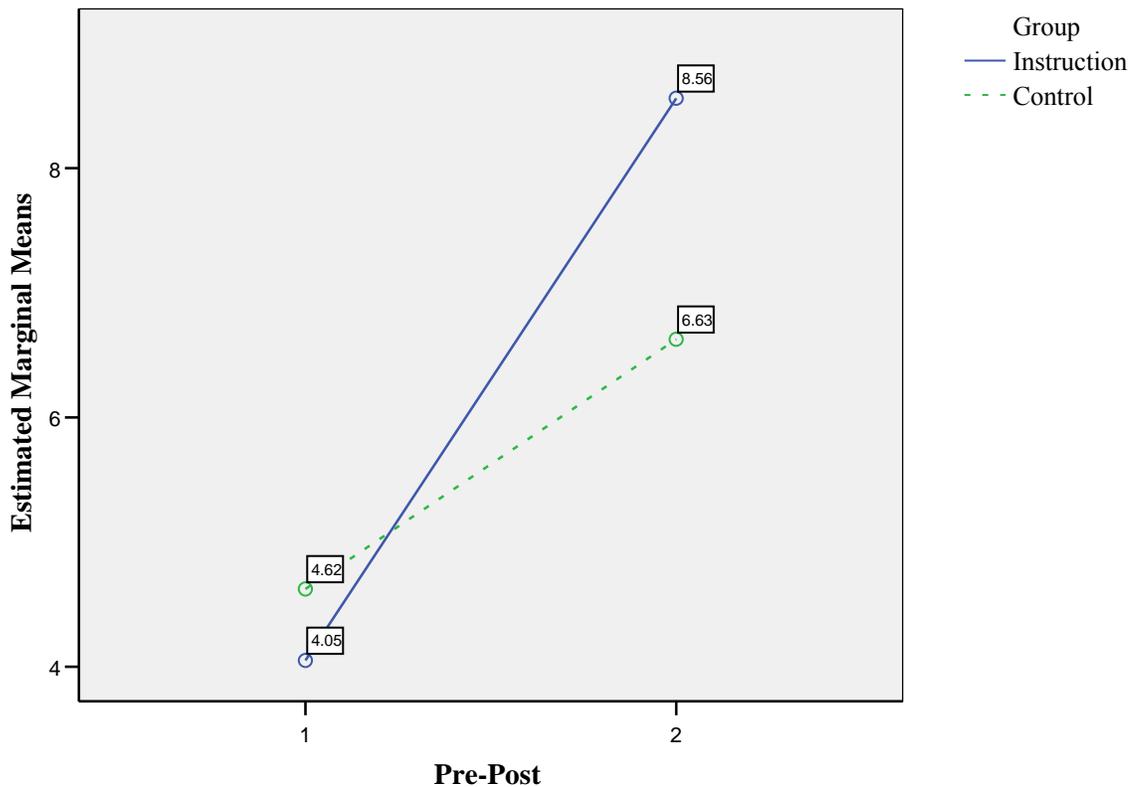


Figure 3. Estimated Marginal Means for LCLI

5.6.4 Lower Case Sound Identification

With respect to LCSi, the MANOVA yielded a significant pre-post main effect, $F(1, 109) 20.83, p < .0005$, and a significant interaction effect for both pre-post and group assignment $F(1, 109) 4.46, p < .05$. There was also a significant effect for the interaction of pre-post and gender $F(1, 109) 4.97, p < .05$, but no significant effect for the interaction of pre-post, group assignment and gender $F(1, 109) 3.03, p = .09$. The LCSi score at post-test for the instruction group ($M = 3.87, SE = .821$) was significantly higher than the pre-test score ($M = .135, SE = .228$), ($F = 1, 109$) $24.01, p < .0005$. The LCSi score at post-test for the control group ($M = 1.82, SE = .882$) was not significantly higher than the pre-test score ($M = .441, SE = .245$), ($F = 1, 109$) $2.81, p = .10$. The pre-post estimated marginal means for LCSi are displayed in the figure below for the instruction and control groups.

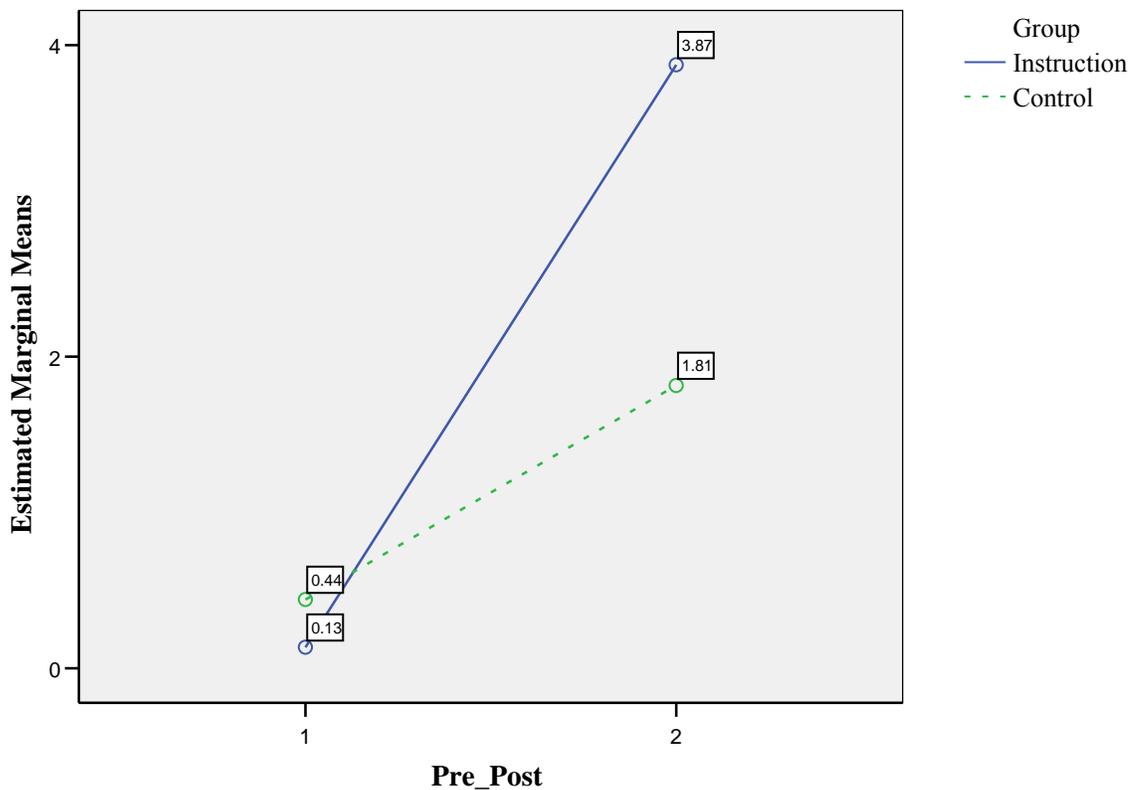


Figure 4. Estimated Marginal Means for LCSi

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With respect to the LCSi pre-post and gender interaction, the boys in the instruction group had a significantly higher post-test score, $t = 2.61, p = .01^5$ compared to the girls. In the control group no significant difference was found, $t = 0.92, p = .36$.

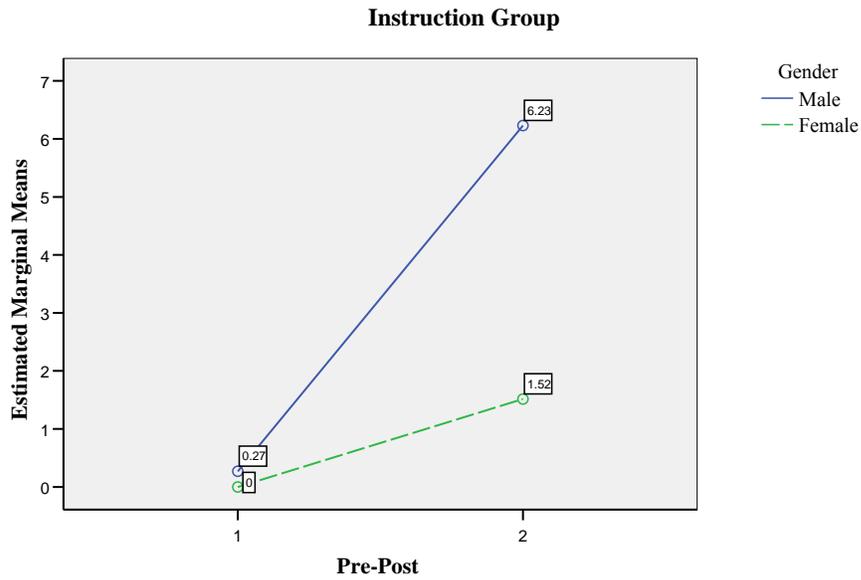


Figure 5. Estimated Marginal Means for LCSi for Boys and Girls in the Instruction Group

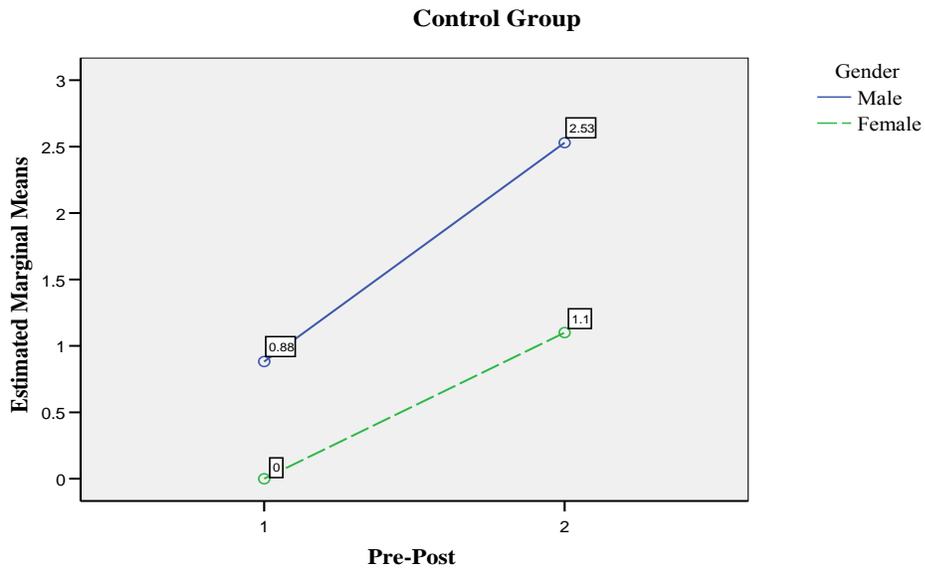


Figure 6. Estimated Marginal Means for LCSi for Boys and Girls in the Control Group

⁵ Two tailed - unequal variances assumed.

5.6.5 Rhyming Words

The MANOVA performed on RW again uncovered a pre-post main effect, $F(1, 109) 16.44, p < .0005$, and a significant interaction effect for both pre-post and group assignment $F(1, 109) 4.71, p < .05$. There was no significant effect for the interaction of pre-post and gender $F(1, 109) 0.51, p = .48$, and no significant effect for the interaction of pre-post, group assignment and gender $F(1, 109) 0.39, p = .53$. The RW score at post-test for the instruction group ($M = 9.34, SE = .795$) was significantly higher than the pre-test score ($M = 7.06, SE = .776$), ($F = 1, 109$) $20.88, p < .0005$. The RW score at post-test for the control group ($M = 7.64, SE = .854$) was not significantly higher than the pre-test score ($M = 6.95, SE = .834$), ($F = 1, 109$) $1.66, p = .20$. The pre-post estimated marginal means for RW are displayed in the figure below for the instruction and control groups.

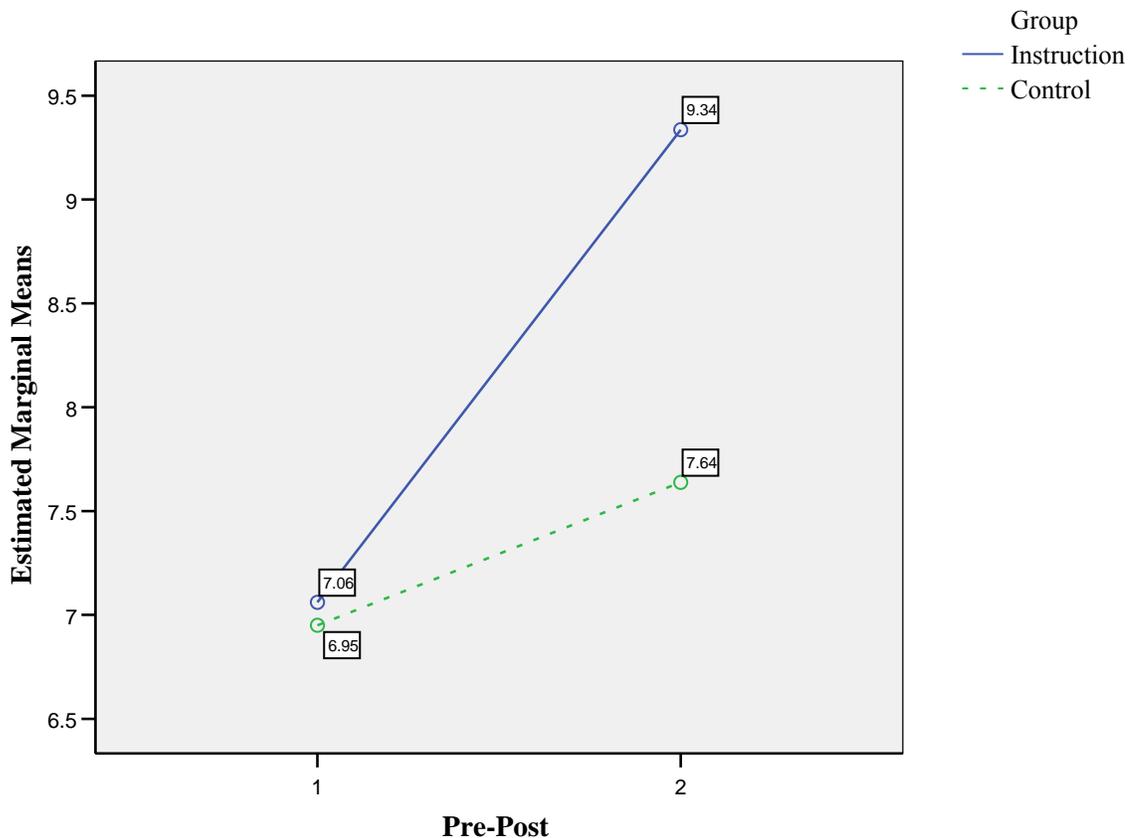


Figure 7. Estimated Marginal Means for RW

5.6.6 Matching First Sounds

In analyzing MFS, the MANOVA yielded a pre-post main effect, $F(1, 109) 17.73$, $p < .0005$, and a significant interaction effect for both pre-post and group assignment $F(1, 109) 5.92$, $p < .05$. There was no significant effect for the interaction of pre-post and gender $F(1, 109) 0.72$, $p = .40$, and no significant effect for the interaction of pre-post, group assignment and gender $F(1, 109) 0.00$, $p = .95$. The MFS score at post-test for the instruction group ($M = 8.52$, $SE = .744$) was significantly higher than the pre-test score ($M = 5.85$, $SE = .672$), ($F = 1, 109$) 23.78 , $p < .0005$. The MFS score at post-test for the control group ($M = 6.49$, $SE = .800$) was not significantly higher than the pre-test score ($M = 5.76$, $SE = .722$), ($F = 1, 109$) 1.48 , $p = .23$.

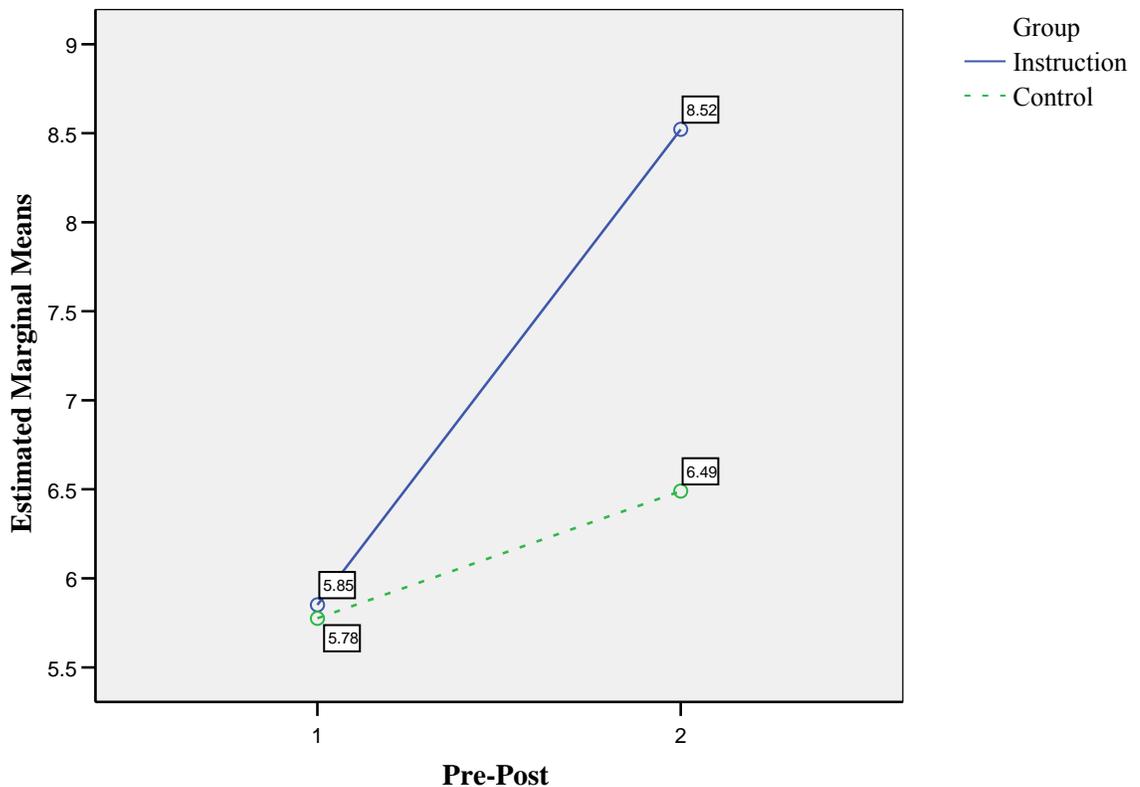


Figure 8. Estimated Marginal Means for MFS

6.0 Discussion/Conclusion

The lack of elementary school readiness⁶ has been related to emotional problems for the individual, the family and society. Lack of school readiness has been shown to have economic costs related to special education, legal services, social services and clinical instruction (Boyle, 1992). If a child is meeting with success in the Kindergarten and grade one classroom, the stress they otherwise would have felt should be greatly mitigated. Reduce the ‘problem’ of poor school performance, and you will reduce the number of children in North America who show signs of an emotional or behavioural problem. (Offord Centre for Child Studies, 2008). In a 1998 survey, the National Assessment of Education Progress found that 69% of fourth graders and 67% of eighth graders were reading below proficiency levels. In fact, 38% of fourth graders had not achieved even basic or rudimentary skills in reading (Shaywitz, 2004). The purpose of this evaluation was to investigate the impact of an experimental language development instructional program⁷ on measures of pre-reading literacy in pre-Kindergarten children.

The evaluation assessed the impact of the PPIP on six outcome measures, Name Assessment (NA), Upper Case Letter Identification (UCLI), Lower Case Letter Identification (LCLI), Lower Case Sound Identification (LCSI), Rhyming Words (RW) and Matching First Sounds (MFS). The results showed a significant interaction effect for pre-post and group assignment for five of the six outcome measures; namely, UCLI, LCLI, LCSI, RW and MFS. This implies that group membership had a significant influence on the outcome scores. The instruction group scored higher than the control group on all five of the abovementioned measures. We should also note that the control group also showed significant gains from the pre-test to post-test for NA, UCLI, and LCLI.

Overall, the results suggest that the instructional program had a significant, positive impact in improving the pre-reading literacy skills of pre-Kindergarten children in a short period of time, compared to no instruction. This was especially true for LCSI, RW and MFS.

⁶ Defined as the ability to identify letters of the alphabet, attach sounds to letters, read simple words, read complex words and read simple sentences.

⁷ Phonics and Phonemics Instructional Program (PPIP)

6.1 Name Assessment

With respect to the name assessment task, both the instruction and control groups improved significantly from pre-test to post-test, yet there was no interaction effect due to group assignment. The instructional program did not directly address this skill in that the program activities focused on gross motor skill development through the sky writing activities and by tracing letters 15 centimetres in height on the activity sheet that was provided in step six of the lesson plans. Sky writing is much like writing a letter on paper, except that one traces a letter using the entire arm in the air, encouraging gross body movements. The children modeled cursive letters for their curvilinear aspects, resulting in smoother reproductions of the letters. The writing instrument does not leave the writing surface when forming cursive letters, unlike normal letters, which require lifting the writing instrument off the page to form the strokes of a single letter. For example, the letter A requires two strokes of the pen, whereas in cursive writing, one smooth stroke forms the letter without leaving the writing surface. Children in the age group of this study tend to scribble when writing or colouring, and hence cursive writing is an extension of what they currently do. Given this, the mutual improvement in the printing of their name likely had as much to do with the child's maturation as with the instructional program. Further, a "Hawthorne" effect may have been present where the children in the control group may have witnessed the instruction group and could have been motivated to improve their performance.

6.2 Upper Case and Lower Case Letter Identification

With respect to both UCLI and LCLI, both groups improved significantly and for both measures we observed a significant interaction effect due to group assignment. During the instruction, the introduction of a new letter (and letter sound) relationship included the presentation of a new key word card (Step 4 in the lesson plan). Two letter formats were presented on each of the keyword cards. The upper case letter was presented in Times New Roman, and the lower case was presented in a cursive format. At the presentation of each keyword card during the review activity, the keyword card would be shown to the students by the instructor, then the students would pronounce the letter, i.e. 'd', pronounce its sound, i.e. /d/ and say the name of the picture on the card, which, for example, would have been the picture of a dog. With respect to the upper case letter identification, there was thus a continual reinforcement of the name of the letter with its shape, which likely contributed to their stronger performance on

the UCLI assessment. With respect to lower case letter identification, the PPIP did not present a lower case letter in Times New Roman, but rather in cursive writing. However, we suspect that there were enough similarities between the upper case letters and lower case letters on the assessments to make them more similar than dissimilar, accounting for the instructional children's relatively stronger performance on their identification. Although the control group also improved significantly due possibly to maturation and the aforementioned "Hawthorne" effect, their improvement did not match the children in the instruction group.

6.3 Lower Case Sound Identification

With respect to LCSi, the instruction group improved significantly and there was a significant interaction effect due to group assignment. The control group did not improve to a significant degree. As mentioned, the instructional program included the introduction of a new letter *and letter sound* using the key word cards for each session. Again, the children would pronounce the letter, pronounce its *sound* and say the name of the picture on the card. The key word card was used to create an association between a common word and a specific *letter sound* found at the beginning of that word. Students would have acquired their first exposure to this letter and its associated sound through this introductory activity. The daily review of the keyword cards (Step 1 in the lesson plan) would have reinforced the visual association of the shape of the letter to its sound. Although the children in the control group may have been influenced by a "Hawthorne" effect, we suspect that knowing the sound of a letter is a more difficult skill to acquire than knowing the name of a letter. This is a skill that can not be obtained as easily by assimilation or maturation but requires instruction and repetition, which the instructional children received and the control children did not. This could explain the significant differences in the post-test scores due to group assignment.

6.4 Rhyming Words

Considering the Rhyming Words assessment, the instruction group improved significantly and there was again a significant interaction effect due to group assignment. The control group did not improve to a significant degree. Phonemic awareness is the ability to

notice, think about, and work with the individual sounds in spoken words. Phonemes are the smallest parts of sound in a spoken word that makes a difference in the word's meaning. Phonemes, being much smaller by nature, focus on a single letter. Rhyming sounds focus on sounds that incorporate a grouping of letters, and are hence much easier to distinguish. For example, the rhyming words bear and pear have a three letter grouping that makes the sound 'air'. This is much broader and hence easier to pick out, whereas the /b/ and /p/ sounds are much smaller, and harder to pick out of the entire word. The PPIP instructional activities emphasized increasing phonemic awareness. All of the activities from each of the lessons contained a component that focused on identifying a specific sound. In fact, three of the activities focused exclusively on discriminating and/or identifying a specific sound. We strongly suspect that these activities and their repetition improved the instructional students' abilities to discriminate sounds and to identify similar sounds, compared to the control group.

6.5 Matching First Sounds

With respect to the Matching First Sounds assessment, the instruction group again improved significantly and there was a significant interaction effect due to group assignment. The control group did not improve to a significant degree. The keyword cards, picture cards and word list activities of the instructional program focused on a target sound in the initial position of a word. This is a key component of the program in that to avoid confusion, it is better to remain consistent in the presentation of sounds, and to focus phonemic awareness at the beginning of a word, rather than in the middle or at the end. It is easier to recognize a sound at one of the ends of a word rather than in the middle. It is also easier to recognize that sound at the beginning of a word rather than at the end, because focusing your attention at the end of a word after hearing all that was at the beginning is more difficult, especially if the word has many syllables. This key component was introduced in each session and repeated throughout the program resulting in a significant increase in the instructional children's ability to match first sounds compared to the control group.

6.6 Limitations

The characteristics of the children in the child care centres that did not record their post-test results tended to be somewhat different than the centres who did record the results. The children in the centres not recording post-test results had higher pre-test scores on NA and LCSL. Further, more of these children had prior literacy instruction and fewer had special needs or were in subsidized spaces compared to the sample. This may have affected the perceived value of the program and its uptake by these centres.

Although the centres were asked to deliver the instruction in a separate location on site, this may not always have been possible, given the physical layout of the centres. This could have resulted in some “contamination” of the control children because they witnessed the instruction and a possible “Hawthorne” effect due to the study.

6.7 Conclusions and Recommendations for Programming and Future Research

According to the Report of the National Reading Panel (2000):

Meta-analysis revealed that systematic phonics instruction produces significant benefits for students in Kindergarten through 6th grade and for children having difficulty learning to read. The ability to read and spell words was enhanced in kindergartners who received systematic beginning phonics instruction. First graders who were taught phonics systematically were better able to decode and spell, and they showed significant improvement in their ability to comprehend text. Older children receiving phonics instruction were better able to decode and spell words and to read text orally, but their comprehension of text was not significantly improved.

National Reading Panel (2000: The Summary Booklet, p. 10)

Systematic phonics instruction improved the ability of good readers to spell across all grades. The strongest impact occurred for kindergartners and decreased in later grades.

Beyond this, there is some evidence to suggest that children's ability to recognize rhyme can predict their progress in reading. Bryant and Bradley (1985) investigated 400 children between the ages of 4 and 5 over four years. At the beginning of the study children were assessed to see how well they could recognize rhyming words. They were given intelligence tests and tested to determine how well they could read and spell at the end of the study. The researchers found that:

The children's score on the initial rhyming test did predict their progress in reading and spelling three to four years later on, and did so very well. The relationship stood even when we removed the effects of difference in intelligence.

(Bryant and Bradley 1985: 57)

Further, phonemic awareness is a key factor in literacy development (Adams, 1990; Whitehurst and Lonigan, 1998). Children who are better at detecting rhymes or phonemes are quicker to learn to read - even after other factors such as vocabulary, memory, and socioeconomic status are taken into account (Wagner and Torgesen, 1987).

More recent research seems to suggest that phonological awareness can be best conceptualized as a single underlying ability that increases in complexity as readers develop (Anthony and Lonigan, 2004).

Finally, in a second study by Bryant and Bradley (1985), they found that "measures of children's sensitivity to rhyme and alliteration predict their progress in reading, and teaching about rhyme and alliteration enhances that progress" (p. 61).

The findings of this evaluation lead us to conclude that the PPIP has the potential to improve school readiness by producing higher scores on school readiness instruments in the specific knowledge areas of identifying letters of the alphabet and attaching sounds to letters and words for children aged 3+ years who are about to enter an elementary school program.

An Evaluation of an Early Years Literacy Instructional Program

Further, the program is easy to deliver and can be implemented by an instructor with little or no formal instructional training. Given this, the program should be made available to all child care centres in Canada and to any other pre-school programs that serve children in the targeted age group.

The findings of this evaluation also suggest a number of options for future research. It would be useful to replicate this study with a larger sample and include a formative evaluation of the program across a range of child care centres. The larger sample would provide more confidence regarding the impacts of the program and would allow for an investigation of differential program effects among subgroups of children. For example, it would be of interest to see if the program has more impact on children with relatively lower pre-school literacy skills. The formative evaluation would also uncover issues related to the program's content and delivery. Ultimately, this would help improve the program's impact. A second study that tracks the progress of the instructional and control students into Kindergarten, and Grades 1 and 2 would further clarify and confirm its impact and value in the longer term.

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Appendix A
PPIP Teacher's Guide

An Evaluation of an Early Years Literacy Instructional Program

Early Years Instructional Program Evaluation



Early Years Instructional Program

Phonics and Phonemics Instructional Program
(PPIP)

Teacher's Guide

(Partial Guide for Example Purposes)

September 2007

Background

The Upper Canada Leger Centre for Education and Training is currently engaged in an evaluation funded by the Canadian Council on Learning. The purpose of this evaluation is to determine whether a language based early educational intervention with children 3 to 4 years of age will result in improving their school readiness upon entering the elementary school system at the kindergarten level.

This educational intervention will be administered to approximately 175 children. Their performance will be compared to 175 children who will not have received this intervention. The objective is to determine whether there was an improvement in the school age readiness of the children exposed to the educational intervention. Portions of this document contain copyrighted material. Some of the clip art is the property of Microsoft Corporation. The letter sequence, selection of vocabulary for Picture Cards and Key Word Cards, as well as instructional activities which were adaptations from an existing program are © 2006 Leisure Learn Ltd, all rights reserved (www.leisurelearn.com). This product is not intended for commercial use or unauthorized distribution. Its contents are intended for the personal use of the Child Care Programs participating in this study both during and after the completion of the project.

The results of this evaluation will be shared with the broader Early Childhood Education community.

Child Care Instructional Program Objectives

Phonemic Awareness

Children will be able to hear and identify individual sounds – phonemes – in spoken words. More specifically, they will be able to:

- Identify the letter sound at the beginning of a word, from a list of four orally presented words in the initial position of a word i.e. pit, pig, pat, poke = /p/.
- Recognize a letter sound at the beginning of a word that is different from a list of orally presented words i.e. dog, dice, *cat*, dance.
- Identify and say the first sound of an orally presented word i.e. what is the first sound you hear at the beginning of the word **dog?** The sound is /d/.

Phonics

Children will be able to recognize the relationship between written letters and spoken sounds. They will be able to:

- Identify the correct written letter on a sheet of paper from an orally presented letter sound i.e. teacher says /k/ and student can identify the letter ‘c’.
- Name the correct letter sound when shown a letter written on a sheet a paper i.e. teacher shows the letter ‘c’ and student says the sound /k/.

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Day 1: Unit 1 - Letter C

TEACHING Tips

- Remember to speak clearly and slowly,
- Praise the child often and,
- Keep the momentum going—have fun!
- NOTE: All picture cards and key word cards must be cut out prior to class.

Materials

- Pencils or crayons
- Key Word Card C
- Picture Cards – sheets 1A, 1B & 1C
- Activity Sheet 1D [one per child]

Step 1 – Picture Cards

- Present the letter “C” picture cards to the children, and ask them to identify and name each picture.
- Q: What is the sound that you hear at the beginning of each word?
Prompt: does anyone hear the /k/ sound?”

Step 2 – Word List

- ❖ Q: What is the initial or first sound you hear in the following words:

cat, corn, cow, cub, car

- ❖ Q: which word starts with a different sound

dart, dice, cow, dog

Olive, otter, oven, cub

Step 3– New Keyword Card

- Present Key Word Card of the letter “C” to the children
- Pronounce the letter “C”—make the sound /k/ - & say “cat”
- Have the child say C—/k/ - cat three times
- Sky write it using whole arm, shoulder and hand 2 or 3 times

Step 4 – Activity Sheet

- Hand out the Activity Sheet **1D** to each child.
- Ask each child to:
 - trace the letter “C” twice with their finger
 - trace a line to the pictures that correspond to the sound /k/ on the page.
 - colour in the letter on Activity Sheet 1D

Optional

- Say the ditty to the children...“Crazy cat can cuddle Colin’s cap”. Ask the children to clap their hands every time they hear the /k/ sound. Repeat this activity 2 or 3 times.

Day 2: Unit 2 - Letter A— Short vowel sound

TEACHING Tips –

- Remember to speak clearly and slowly,
- Praise the child often and,
- Keep the momentum going—have fun!

Materials

- Pencils or crayons
- Key Word Card C, A
- Picture Cards – sheets 2A, 2 B & 2C
- Activity Sheet 2D [one per child]

Step 1 - Keyword Card Review

1. Show the letter “C” Key Word Card saying “C”, /k/, cat.
 - a. Ask the children to write the letter on the floor/desk or in hand while saying “C”, /k/, cat;

Step 2– Picture Cards

- Present the letter “A” picture cards to the children, and ask them to identify and name each picture.
- Q: What is the sound that you hear at the beginning of each word?
Prompt: does anyone hear the / ă / sound?”

Step 3– Word List

- ❖ Q: What is the initial or first sound you hear in the following words:

apple, animal, ant, Annie

- ❖ Q: which word starts with a different sound

Cat, cap, cake, dog

Girl, gum, doll, game

Step 4 – New Keyword Card

- Present Key Word Card of the letter “A” to the children
- Pronounce the letter “A”—make the sound /ă/ - & say “alligator”
- Have the child say A—/ă/ - Alligator three times
- Sky write it using whole arm, shoulder and hand 2 or 3 times

Step 5 – Pick Out the Sound

- Instruct the child to raise her hand when she hears you pronounce the /ă/ sound.
- Now clearly pronounce the sounds /k/ /k/ /ă/ /ă/ /k/ /ă/ .
- Repeat this activity two more times, saying /ă/ /k/ /ă/ /k/ /ă/ /k/. and then /k/ /ă/ /ă/ /k/ /ă/ /ă/ .

Step 6 – Activity Sheet

- Hand out the **Activity Sheet 2D** to each child.
- Ask each child to...
 - trace the letter “A” twice with their finger
 - trace a line to the pictures that correspond to the sound /ă/ on the page.
 - colour in the letter on Activity Sheet 2D

Optional

- Say the ditty to the children...“ *Aunt Annie’s alligator acted amicably*”.. Ask the children to clap their hands every time they hear the /ă/ sound. Repeat this activity 2 or 3 times.

Day 3: Unit 3 - Letter D

Materials

- Pencils or crayons
- Key Word Card C, A, D
- Picture cards – sheets 3A, 3B, 3C
- Activity Sheet 3D [one per child]

Step 1 - Keyword Card Review

1. Show the letter “C” Key Word Card saying “C”, /k/, cat.
 - a. Ask the children to write the letter on the floor/desk or in hand while saying “C”, /k/, cat
2. Repeat for A - /ă / - Alligator.

Step 2– Picture Cards

- Present the letter “D” picture cards to the children, and ask them to identify and name each picture.
- Q: What is the sound that you hear at the beginning of each word? Prompt: does anyone hear the /d/ sound?”

Step 3– Word List

- ❖ Q: What is the initial or first sound you hear in the following words:

dog, dirt, dill, door

- ❖ Q: which word starts with a different sound

Gum, go, gone, door

pan, pipe, pot, quilt

Step 4– New Keyword Card

- Present Key Word Card of the letter “D” to the children
- Pronounce the letter “D”—make the sound /d/ and say “dog”
- Have the child say D—/d/ - “dog” three times
- Sky write it using whole arm, shoulder and hand 2 or 3 times

Step 5 – Pick Out the Sound

- Instruct the child to raise her hand when she hears you pronounce the /d/ sound.
- Now clearly pronounce the sounds /d/ /d/ /ă/ /ă/ /d/ /ă/ .
- Repeat this activity two more times, saying /ă/ /d/ /ă/ /d/ /ă/ /d/. and then /d/ /k/ /k/ /d/ /k/ /k/

Step 6 – Activity Sheet

- Hand out the **Activity Sheet 3D** to each child.
- Ask each child to...
 - trace the letter “D” twice with their finger
 - trace a line to the pictures that correspond to the sound /d/ on the page.
 - colour in the letter on Activity Sheet 3D

Optional

- Have the child “walk” the letter, repeating the name and sound over and over.
- Have them walk it like a dog, a dragon, a duck.

Appendix B

Childcare Centre Registration Form



Early Years Instructional Program Evaluation

Section 1: General Information

Name of Day Care: _____

Address: _____

Telephone: _____ Fax: _____

Contact Person(s): _____

Telephone: _____ E-mail: _____

Section 2: Day Care Information

How many children is your day care licensed for? _____

How many children attend your day care centre? _____

How many children will be between 3.5 and 4.5 years of age in Sept, 2007? _____

How many of these children would you estimate as full time? _____

Please estimate percentage (%) drop out of children over a year: _____

How many staff are employed at the day care centre? _____

Number of full time employees: _____

Number of part time employees: _____

What are the hours of operation at the day care centre? _____

How many rooms are there in the day care centre? _____

Do you have access to the internet? _____

Do you have access to a DVD Player (or DVD Rom)? _____

Do you have access to VCR? _____

Do you run a structured English language/Phonics program? _____

If yes, what is the name of the program? _____

Please forward by mail, fax or e-mail to:

Project Coordinator
Upper Canada Leger Centre for Learning and Education (UCLCET)
1950 Montreal Road, Cornwall, Ontario, K6H 6L2
Telephone: 613-936-5296; 1-866-380-8252 Fax: 613-936-5292
Email: devorah.belinsky@uclc.ca

Appendix C

Early Years Instructional Program Assessment Package

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Introduction

Hello there! Thanks for helping us with the Early Years Instructional Program! Please read this entire package before you start the literacy instruction or do any assessments of the children. If you have any questions about any of this material, please call Claude at 613-936-6076. You may use the following long distance calling card number 1-866-355-2155 PIN# 4199 0088 5387 and this call will be toll free. Thanks!

As you know, your child care centre will be offering literacy instruction using the Early Years Instructional Program. In order to know if the program makes any difference in the literacy skills of children, we need to compare the skills of children who receive the instruction from those who don't. The way we're going to do this is to "test" both groups of children (those who receive the instruction and those who don't) both before the training and after it's over. This document contains the "test" or assessments and the directions for giving them to the children.

We also plan to input the results of the tests using the internet. This will be easier for you (and for us) as we don't have to copy the forms for each child, package them up and mail them across the country. All we need is a computer with an internet connection. So...this package has been prepared to help you help us. Specifically, the package will explain:

1. How to select children who will receive the literacy training from those who won't.
2. How to provide a letter of consent to parents.
3. How to actually do the assessments.
4. How to organize the results of the assessments so as to maintain the confidentiality of the children.
5. How to enter the results of the assessments on the internet.

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Please Note to be mindful of the official start date of the implementation of the instructional program, and to plan your time accordingly.

The Official start date for the delivery of the program is:

Monday January 14th, 2008.

All programs must start on this date.

First Task: Selecting Children Who Will Receive the Literacy Instruction

The first task is to form the two groups of children – those who will receive the literacy instruction and those who won't. We will be forming the two groups randomly.⁸ In order to form the groups this way, please do the following.

1. List all the children in your centre born in 2004 who will be turning four years of age in 2008 and are eligible to enter Junior Kindergarten in September, 2008 on a piece of paper alphabetically by last name. If their names are computerized than just print off the list.
2. Now please number the names. Please write the number “1” beside the first name in the list, then the number “2” beside the second name, then “3” beside the third name and so on for the whole list.

⁸ If you think you will have a problem assigning children randomly to the two groups, call Claude at 613-936-6076.

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3. Half of the children on the list will receive the literacy instruction and half will not. Given this, decide how many children will be in the literacy instruction group. (If you have an odd number of children so you can't split the groups equally, we provide a solution on the next page.)
4. The table below is a random number table. We're going to use the table to randomly select children for the literacy instruction.

We'll use an example to show you how it's done. Let's say you have 24 children starting Junior Kindergarten in September, 2008. This means that 12 (half) are going to receive the literacy instruction. You have already prepared the list and numbered the children from one to 24.

Starting at Column One in the table, run your finger down the column until you hit a number that is equal to or less than 24. In fact, 20 is the first number you hit. Select child number 20 as the first child to receive the literacy instruction. Keep going down Column One and you hit "12". Twelve is less than 24 so select child number 12 as the second child to receive the literacy instruction. Keep going down Column One and you hit "9". Nine is less than 24 so choose child nine as the third child to receive the literacy instruction. Then move to Column Two and go down it. You hit "21", which is less than 24. Select child 21 as the fourth child to receive the literacy instruction. Continue moving down the columns and then to the next columns until you have selected all the 12 children who will receive the literacy instruction.

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Random Number Table

Column One	Column Two	Column Three	Column Four	Column Five	Column Six	Column Seven	Column Eight	Column Nine	Column Ten
20	70	66	81	61	8	51	45	71	96
72	34	14	27	28	67	99	75	82	37
12	21	5	18	7	69	17	35	22	83
79	10	73	93	57	39	25	36	30	87
9	90	84	85	38	55	3	86	64	58
29	31	33	56	68	89	62	6	76	91
32	88	65	74	80	92	13	40	49	16
97	50	41	4	98	48	63	78	42	46
43	1	24	47	59	44	95	15	77	26
60	11	23	53	2	54	94	19	100	52

The 12 children who you did not select will not receive the literacy instruction but will still be “tested” before and after the instruction (as will the group receiving the instruction). The 12 children receiving the literacy training will be called the “instruction group” and the 12 children not receiving the literacy training will be called the “comparison” group. In the example, we had an even number of children. If you have an odd number of children in your list, you will have one “extra” child that could receive the instruction or not. In this case, just flip a coin - “heads” they receive the instruction – “tails” they do not.

The number you assigned to the child will be used to identify him/her on all the forms you will be completing (without using his/her name). We will call this number the Child Identification Number.

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We would suggest you now make two separate lists with each child's name and Child Identification Number. One list is the instruction group and the second list is the comparison group.

Second Task: Giving Consent Forms to Parents

Because we will be testing and instructing young children, it is necessary that we obtain their parents' consent to allow their children to be involved in the literacy training and to be "tested" or assessed. For this reason, we have included a Letter of Consent for Parents of children who will receive the instruction and a Letter of Consent for parents of children who will not in Appendix A and B of this package. They may also have questions about the project. If this is the case, the letter asks them to contact a representative at your child care centre who will then contact our study project manager.

Please make copies of this letter and give it to the appropriate parents. The parents will let you know only if they do NOT want their children involved. If a parent does not want to have their child involved, then so be it.

By the way, parents of children who will not receive the instruction may ask why their child is not getting the training. You could explain that this is a "pilot" project and that their child will receive the instruction when the pilot is over in March/April, 2008.

Third Task: Doing the Assessments

We will be assessing the children using four "tests" that were developed at the University of Chicago. The tests are part of the Strategic Teaching and Evaluation of Progress (STEP) project. The advantage of these tests is that they are easy to administer and do not take a lot of time. The tests are:

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Test One: Name Assessment: For this test you will ask the child to write out their first and last name as best as they can. After this, you will ask them to show you the first and last letters in their name by asking; Where is the “m” in your name?; Where is the “b” in your name?; and so on. You will then give the child a score from one to five according to the scoring directions provided.

Test Two: Letter and Letter Sound Identification: For this test you will show the child a piece of paper with upper case letters on it and then one with lower case letters on it. For both upper and lower case letters, you will ask the child to name the letter. After naming all the lower case letters, and if the child got 15 or more letter names right, you will then ask the child to say the sound the letter makes. The child’s score is the number of letter names and sounds she/he gets right.

Test Three: Rhyming Words: For this test you will show the child a picture, for example, the picture of a mouse. You will then show him three new pictures. You will ask him to point to the picture that sounds the same as “mouse” (e.g., house). The child’s score is the number of times she/he identifies the correct picture. There are two series of pictures for this test – the purple series and the yellow series. You will be using both series to test the child.

Test Four: Matching First Sounds: For this test you will again show the child a picture, for example, the picture of a cat. You will then show her three new pictures. You will ask her to point to the picture that starts with the same sound as “cat” (e.g., cake). You will ask the child to do this for a number of pictures. The child’s score is the number of times she/he identifies the correct picture. There are also two series of pictures for this test – the purple series and the yellow series. Again, you will be using both series to test the child.

The results of the four tests are recorded on one form – the Summary Score Sheet Form. (Please see Appendix G and H.)

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One important point is that the person doing the assessments CANNOT be the person who is instructing the children. Hopefully, it can be someone who works in the child care centre but has little or no connection to the instruction.

Detailed Administration Instructions

The detailed assessment administration instructions for each test are included on sheets in the appendices. Specifically:

Appendix C: the Name Assessment Test

Appendix D: the Letter and Letter Sound Identification Test

Appendix E: the Rhyming Words Test

Appendix F: the Matching First Sounds Test

Appendix G and H contains the Summary Score Sheets that you will use to record the child's results for all four tests both before the instruction (Appendix G) and after (Appendix H).

Viewing The DVD

Aside from reading the administration instructions in the appendices, PLEASE VIEW THE DVD THAT CAME WITH THIS PACKAGE. It shows you how the tests are administered in a real setting and will give you a good idea as to how the assessments are done. Once the DVD is loaded, select "Pre-Reading" and then watch "Name Assessment" and "Rhyming". Then go back to the first menu and select "Matching First Sounds". There are more tests on the DVD than we are using, so you just need to select the ones we are using. There is no DVD scene for the "Letter and Letter Sound Identification" test but, as you will see, it follows the same procedures as the "Rhyming" and "Matching First Sounds" test.

Practice Makes Perfect

Also, before you begin the actual assessments, we would like you to “practise” the assessments on three or four older children who are not part of this project. While you are practising, could you please ask one of your co-workers to observe you. For each test, we have provided a checklist of the kinds of things we would like to see happen during the assessment that the “observer” will check off. Please keep practising until all boxes are checked “fine” and both you and your co-worker feel you are ready. The four checklists – one for each test - are in Appendix I.

Preparing for the Assessment

There are five items that you will need to pay attention to in doing the assessments.

1. Making sure you have all the assessment materials ready for each of the four assessments.
2. Finding a quiet place to do the assessments, establishing rapport with the child and making them comfortable.
3. Going through the examples as described in the instructions for each assessment.
4. Doing the assessments.
5. Recording the score immediately after the assessment on the Summary Score Sheet Form.

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When to Assess the Children

The Official start date for the delivery of the program is:

Monday January 14th, 2008.

All programs must start on this date.

Both groups of children will receive two rounds of assessments – one round in the week of January 7th to January 11th, 2008 and a second round in the week after the literacy instruction is over. The table below describes this in more detail.

Testing Schedule

	Instruction Group	Comparison Groups
Week of January 7 th to 11 th , 2008 (Pre-Test)	<u>Tests to be Administered to Each Child</u> Name Assessment Test Letter and Letter Sound Identification Test Rhyming Words Test Matching First Sounds Test	<u>Tests to be Administered to each Child</u> Name Assessment Test Letter and Letter Sound Identification Test Rhyming Words Test Matching First Sounds Test
Week After the Literacy Instruction	<u>Tests to be Administered to Each Child</u> Name Assessment Test Letter and Letter Sound Identification	<u>Tests to be Administered to Each Child</u> Name Assessment Test Letter and Letter Sound Identification

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(Post-Test)	Test Rhyming Words Test Matching First Sounds Test	Test Rhyming Words Test Matching First Sounds Test
-------------	--	--

The official end date of the implementation of the program

is no later than:

Friday April 11th, 2008.

Fourth Task: Completing the Child Profile Form

We would like to obtain some additional information for each child in the instructional and comparison groups. This information will help us to better understand the differences we might find in the children's scores on the tests. This information is on the Child Profile Form in Appendix J. Could you please record this information for each child BEFORE THE START OF THE LITEARCY INSTRUCTION. Thanks.

Fifth Task: Completing the Instructor and Assessor Profile Forms

We would also like to obtain some information about the literacy instructors and assessors. This information will again help us better understand the differences we might find in the children's scores. This information is on the Instructor/Assessor Profile Form in Appendix K. Could both the instructor and assessor please complete this form. Please remember, it is completely anonymous.

If your child care centre has more than one instructor and/or more than one assessor, please have each instructor/assessor complete the Instructor/Assessor Profile Form. Please assign each instructor/assessor a number (i.e., "1" for the first instructor, "2" for the second instructor, "1" for the first assessor, "2" for the second assessor etc.) and use this number when you are completing the Instructor/Assessor Profile Form. If a centre has only one instructor and/or assessor, the instructor and/or assessor number is "1".

Sixth Task: Completing the Child Care Centre Profile Form

Finally, we would like to obtain some additional information about your child care centre. Please complete the Child Care Centre Profile Form in Appendix L.

Seventh Task: Organizing the Assessments

The Official start date for the delivery of the program is:

Monday January 14th, 2008.

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All programs must start on this date.

Before the Literacy Instruction Starts...

Before the literacy instruction starts you should have completed:

1. An Instructor Profile Form for each instructor
2. An Assessor Profile Form for each assessor
3. One Child Care Centre Profile Form

and for each child in both the instruction and comparison groups you should also have completed:

4. A Child Profile Form
5. A “Before the literacy instruction” Summary Score Sheet form for each child who will take the literacy training
6. A “Before the literacy instruction” Summary Score Sheet form for each child who will not take the literacy training

After the Literacy Instruction

A week after the literacy instruction ends you should have completed for each child in both the instruction and comparison groups:

1. An “After the literacy instruction” Summary Score Sheet form for each child who took the literacy training
2. An “After the literacy instruction” Summary Score Sheet form for each child who did not take the literacy training

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The official end date of the implementation of the program

is no later than:

Friday April 11th, 2008.

We have provided you with a number of envelopes. We would suggest you keep the Instructor Profile Form(s), Assessor Profile Form(s) and Child Care Centre Profile Form in one envelope with your child care centre number written on it (Please see Appendix M).

We would also suggest that the Child Profile Form, the Summary Assessment Form completed before the instruction and the Summary Assessment Form completed after the instruction all be kept in one envelope for each child in both the instruction and comparison group. We would further suggest writing the Child Identification Number on the outside of the envelope. Please keep all the envelopes in a secure (lock and key) location.

Eighth Task: Entering the Assessment Results on the Web

The fifth and last task is to enter the information recorded on the above forms using a web-based form. This will save you having to copy all the paper forms and mail them to us. There are four web-based forms:

1. An Instructor/Assessor Profile Form
2. A Child Care Centre Profile Form
3. A Child Profile Form
4. A Summary Score Sheet Form

To get to the forms, you simply click on the link for the form that is provided below and follow the instructions. You don't have to wait until you have completed all the paper forms to enter information using the web-based forms. You can use the web forms whenever you like, once the paper forms have been completed. Just make sure you tick the "Entered on Website" box and the date of entry on the paper form so you don't enter a paper form twice. The numbers we have assigned to identify the different child care centres can be found in Appendix M. Please use this number to identify your centre on the paper forms.

Thanks!

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Links to Web Based Forms

Form	Link
Instructor/Assessor Profile Form	http://www.surveymonkey.com/s.aspx?sm=2Z1z77s6trD0MjSpKOPyKA_3d_3d
Child Care Centre Profile Form	http://www.surveymonkey.com/s.aspx?sm=jAWYz0vkb0_2frPwbX5t9j0w_3d_3d
Child Profile Form	http://www.surveymonkey.com/s.aspx?sm=c_2fafUI40iO1avD17NqIWfg_3d_3d
Summary Score Sheet Form	http://www.surveymonkey.com/s.aspx?sm=jizOp4Zf1Fr7oFE_2fl1N_2f4A_3d_3d

Appendix A: Letter of Consent for Parents of Children Receiving Literacy Instruction

Dear Parent or Guardian:

The children at your child's child care center have been selected to be part of a research study run by the Upper Canada Leger Centre for Education and Training. The research project is looking at the effectiveness of a basic language training course for children.

Your child has been selected to receive eight weeks of basic language training. In basic language training children will be taught the names and sounds of the letters of the alphabet. Aside from the training, a key part of the research is to ask children a number of questions that assess their literacy skills before and after the course. For example, the children would be asked to identify and say the first sound of a word such as: what is the first sound you hear at the beginning of the word dog? Their answers will tell us how good the literacy training was.

This questionnaire is not a test and will not be used to look at any one particular child. No one will know how your child answered because the child care center and child's name will not be written on any forms. After the forms are done, they will be kept securely locked away and will be thrown out within three years. The results will be presented as groups only.

If you DO NOT want your child to be part of this training and research, please complete the form below and return it to the child care center as soon as possible. If you agree that it's okay for your child to be part of the research, you don't have to do anything.

Should you have any additional questions or concerns about the research, please contact a representative at the child care centre and she/he will contact me at the Upper Canada Leger Centre. I will then will get back to you.

Thank you for your cooperation.

Sincerely,

Claude Lauzon

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Project Manager

Upper Canada Leger Centre

*Please return the bottom portion of this form to the child care center if you **do not wish** your child to take part in this training and research.*

Please withdraw my child from participating in this training and research.

Child's name: _____

Child care center: _____

Parent's/Guardian's Signature: _____ Date: _____

Appendix B: Letter of Consent for Parents of Children Not Receiving Literacy Instruction

Dear Parent or Guardian:

The children at your child's child care center have been selected to be part of a research study run by the Upper Canada Leger Centre for Education and Training. The research project is looking at the effectiveness of a basic language training course for children.

A key part of the research is to ask children a number of questions that assess their literacy skills before and after the course. For example, the children would be asked to identify and say the first sound of a word such as: what is the first sound you hear at the beginning of the word dog? Their answers will tell us how good the literacy training was.

This questionnaire is not a test and will not be used to look at any one particular child. No one will know how your child answered because the child care center and child's name will not be written on any forms. After the forms are done, they will be kept securely locked away and will be thrown out within three years. The results will be presented as groups only.

If you DO NOT want your child to be part of this research, please complete the form below and return it to the child care center as soon as possible. If you agree that it's okay for your child to be part of the research, you don't have to do anything.

Should you have any additional questions or concerns about the research, please contact a representative at the child care centre and she/he will contact me at the Upper Canada Leger Centre. I will then get back to you.

Thank you for your cooperation.

Sincerely,

An Evaluation of an Early Years Literacy Instructional Program

Claude Lauzon
Project Manager
Upper Canada Leger Centre

*Please return the bottom portion of this form to the child care center if you **do not wish** your child to take part in this research.*

Please withdraw my child from participating in this research.

Child's name: _____

Child care center: _____

Parent's/Guardian's Signature: _____ Date: _____

Appendix C: Detailed Administration Instructions for the Name Assessment Test

Name Assessment (Pre-Reading)

Administration

- ▶ Ask the child to write his or her name in the space provided on the Pre-Reading assessment form.
- ▶ **Summary Score Sheet Form.** If the child's name is long, ask to be shown the first and last letter in the name. *For example, Mary, can you show me the "M" in your name? Can you show me the "Y" in your name?*

What if . . . ?

the child writes only the first name?

Ask the child to write the last name as well.

the first and last letters in the child's name are the same (e.g., David)?

Ask the child to show you a different letter: *David, can you show me the "A" in your name?*

Scoring

- ▶ Use the five-point rubric to score the child's writing. Place a ✓ by the descriptors demonstrated by the child. Remember that a child's writing may sometimes show characteristics across two categories. You will have to choose the place on the rubric that best fits what the child has done.

What if . . . ?

the child has written letters backwards or has written upper- and lower-case letters interchangeably?

Note that the child will need future instruction in these areas. Neither of these instances is penalized within the rubric.

Appendix D: Detailed Administration Instructions for the Letter and Letter Sound Identification
Test

Letter and Letter-Sound Identification (STEPS 1–3)

Note: The letter identification charts are not in the appendix. They have been provided as separate documents.

Administration

- ▶ Use the letter identification charts in the appendix of this manual.
- ▶ Ask the child to identify the letters as letters by saying, *What do you call these?*
- ▶ Use a blank sheet of paper to cover all the rows except the first. You want the child to focus on one row at a time.
- ▶ Ask the child to point to each letter and tell you the name of that letter: *I want you to tell me the name of the letters. Let's start here. What is this letter? . . . Now you point to each letter and tell me its name.*
- ▶ Continue through each row of upper-case letters.

What if . . . ?

the child pauses?

Allow five seconds for the child to think. You can prompt with *Give it a try?* or *What do you think?*

the child still doesn't answer?

Move on: *Let's try the next one.*

the child becomes upset because he or she doesn't know the letter?

Reassure the child and move on: *It's okay if you don't know all the letters yet. I know that you are still learning them. Keep going.*

the child says an incorrect response?

Keep going, but do not correct the child. When corrected, children are less likely to attempt other letters.

the child knows very few letters?

Take your time and allow the child to demonstrate everything he or she does know. But do not go so slowly that the experience becomes painful for the child. For example, you might run your finger under a row of letters and say, *Do you know any letters in this row?*

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- ▶ After completing the upper-case letters, repeat the procedure with the lower-case letters.
- ▶ If the student identifies more than fifteen lower-case letters, return to the beginning of the lower-case sheet and ask the child for the letter sound: *This time I want you to point to each letter and tell me the sound the letter makes.*

What if . . . ?

the child says a word that starts with the letter?

Give prompts that help the child isolate the letter sound: *What sound do you hear at the beginning of dog?* or *What sound does the letter d make in the word dog?*

the child says the long-vowel sound?

Prompt for the short-vowel sound: *Do you know the other sound this letter makes?* or *Do you know the short sound this letter makes?*

the child gives the /j/ sound for the letter g or the /s/ sound for the letter c?

Prompt for the more common hard sound: *Do you know the other sound this letter makes?*

Appendix E: Detailed Administration Instructions for the Rhyming Words Test

Rhyming Words (Pre-Reading)

Administration

- ▶ Use the "Pictures for Rhyming Words Assessment" for the Yellow and Purple series in the appendix of this manual.
- ▶ Introduce the assessment by explaining what it means for words to rhyme: *We're going to find pictures of words that rhyme. Words like dog, log, frog. Do you hear how those words sound the same at the end? Dog, log, frog are rhyming words.*
- ▶ This assessment begins with a practice set. Show the student the first two rows of pictures. (These are the practice sets.) Cover the other rows with a blank sheet of paper. You want the child to focus on one row at a time.
- ▶ Point to the picture of the king and say its name. Then ask which word rhymes with king. Point to the three pictures and say their names: *This is a king. Which word rhymes with king? Ring? Pig? Eye?*
- ▶ When the child says *ring* or points to the ring, let the child know that the practice was done correctly: *Good. King and ring rhyme.*
- ▶ Repeat this procedure for the second row in the practice set.

Note: The "Pictures for Rhyming Word Assessment" are not in the appendix. They have been provided as separate documents.

What if . . . ?

the child gives an incorrect response during the practice set?

Ask the child to listen again, this time saying the words in pairs. *This is a king. King, ring. Do they rhyme? King, pig. Do they rhyme? King, eye. Do they rhyme?*

the child continues to have difficulty?

Help the child hear the rhymes by asking him or her to say the words with you. The purpose of the practice set is to help the child gain an understanding of the task.

- ▶ After the practice set, begin the full assessment. Now it is up to the child to show an understanding of rhyme. Do not assist the child.

- ▶ Use a similar procedure for each row, sliding the blank paper down as you go: *Now we're ready to do some more. Listen and show me the pictures that rhyme.*
- ▶ Point to the pictures as you say them: *This is a pail. Which word rhymes with pail? Nail? Tie? Glove?*
- ▶ Repeat the name of a picture if the child asks or says the name incorrectly. For example, if the child says *bucket* instead of *pail*, tell the child that it is a *pail*.

What if . . . ?

the child pauses?

Give the child five seconds to think. You can prompt with *Give it a try?* or *What do you think?*

the child still doesn't answer?

Move on: *Let's try the next one.*

the child asks you to repeat the words?

Repeat the words, but do so only once per row.

the child looks to you to confirm an answer?

Say to the child, *Point to the one that you think rhymes.*

Scoring

- ▶ Place a ✓ for each correct response in the grid on the assessment form. Notice that the practice set is not scored.
- ▶ Take care that the child is not watching your scoring. Be as inconspicuous as possible.

What if . . . ?

the child points to an incorrect picture but then self-corrects?

Give the child credit.

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NOTE!!: Please test the child using the purple series first then continue the test with the yellow series. Please ignore the first two practice picture sets for the yellow series when doing the test. That is, please ignore (king, ring, pig eye) and (man, corn, pan, crab). Thanks!

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Appendix F: Detailed Administration Instructions for the Matching First Sounds Test

Matching First Sounds (STEP 1)

Administration

- ▶ Use the “Pictures for Matching First Sounds Assessment” in the appendix of this manual.
- ▶ Introduce the assessment by explaining what it means to hear first sounds: *We’re going to find pictures of words that start with the same first sound—words like door, dog, day. Do you hear how those words sound the same at the beginning?* Repeat the words, emphasizing the first sound: *Door, dog, day all begin with the same sound.*
- ▶ This assessment begins with a practice set. Show the student the first two rows of pictures. (These are the practice sets.) Cover the other rows with a blank sheet of paper. You want the child to focus on one row at a time.
- ▶ Point to the picture of the bat and say its name. Then ask which word starts with the same sound. Point to the three pictures and say their names: *This is a bat. Which word starts the same as bat? Spoon? Bed? Top?*
- ▶ When the child *answers bed* or points to the bed, confirm that the task was done correctly: *Good. Bat and bed start with the same sound.*
- ▶ Repeat the procedure for the second row in the practice set.

Note: The “Pictures for Matching First Sound Assessment” are not in the appendix. They have been provided as separate documents.

What if . . . ?

the child gives an incorrect response during the practice set?

Ask the child to listen again while you repeat the words, this time in pairs: *This is a bat. Bat, spoon. Do they start the same? Bat, bed. Do they start the same? Bat, top. Do they start the same?*

the child continues to have difficulty?

Help the child hear the first sound by asking him or her to say the words with you. The purpose of the practice set is to help the child gain an understanding of the task.

-
- ▶ After the practice set, begin the full assessment. Now it is up to the child to show an understanding of first sounds. Do not assist the child.
 - ▶ To begin, use a similar procedure for each row, sliding the blank paper down as you go: *Now we're ready to do some more. Listen and show me the pictures that start the same.*
 - ▶ Point to the pictures as you say them: *This is a leg. Which word starts the same as leg? Ball? Lamp? Harp?*
 - ▶ Repeat the name of a picture if the child asks or says the name incorrectly. For example, if the child says *foot* instead of *leg*, say that it is a *leg*.

What if . . . ?

the child pauses?

Give the child five seconds to think. You can prompt with *Give it a try?* or *What do you think?*

the child still doesn't answer?

Move on: *Let's try the next one.*

the child asks you to repeat the words?

Repeat the words, but do so only once per row.

the child looks to you to confirm an answer?

Say to the child, *Point to the one that you think starts the same.*

Scoring

- ▶ Place a ✓ for each correct response in the grid on the assessment form. Notice that the practice set is not scored.
- ▶ Take care that the child is not watching your scoring. Be as inconspicuous as possible.

What if . . . ?

the child points to an incorrect picture but then self-corrects?

Give the child credit.

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NOTE!!: Please test the child using the purple series first then continue the test with the yellow series. Please ignore the first two practice picture sets for the yellow series when doing the test. That is, please ignore (bat, spoon, bed, top) and (car, cake, chair, bike). Thanks!

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Appendix G: Summary Score Sheet to Be Used Before the Literacy Instruction

Summary Score Sheet Before the Literacy Instruction

STEP Literacy Assessment[®] : Before Literacy Instruction

Pre-Reading

Child Identification Number _____

Child Care Centre Number _____

Name of Assessor: _____ Date of Assessment: _____

Name Assessment

Ask the child to write her name on the lines below. If she writes only the first name, ask her to write the last name also. After the child finishes writing, ask her to show you the first and last letters in her name. For example, "Mary, can you show me the "m" in your name? Can you show me the "y" in your name? Then ask her to show you an additional letter, e.g., "Can you show me the "a" in your name?"

Scoring Rules

5	First and last names are spelled correctly Identifies the three letters in name May include a mixture of upper and lower-case letters Some letters may be reversed
4	First name is spelled correctly Identifies the three letters in name May include a mixture of upper and lower-case letters Last name is attempted and contains most letters Some letters may be reversed
3	Includes all or most letters in first name May not identify the three letters in name Most letters are formed correctly, but some may be slightly incorrect
2	Has one or two letters of first name May include additional letters not in first name
1	May include some letters that are not in first name May write shapes that resemble letters
0	Scribbles or makes no attempt

Upper Case Letter Identification

Using the "Upper Case Letter Identification" page, ask the child to point to and identify the upper-case letter names.

Indicate correct response with a \checkmark ;

Indicate no response with a \bullet ;

If a child responds incorrectly, record what she says.

	A	F	K	P	W	Z	B	H	O	J	U	C	Y	L	Q	M	D	N	S	X	I	E	G	R	V	T
Letter Name																										

Total correct _____ of 26 names

Child Identification Number _____

Child Care Centre Number _____

Before

Lower Case Letter Identification and Letter-Sound Identification

Using the "Lower Case Letter Identification" page, ask the child to point to and identify the lower-case letter names.

If a child scores 15 or more, ask them to go through the list again and ask what sound each letter makes.

	a	f	k	p	w	z	b	h	o	j	u	a	c	y	l	q	m	d	n	s	x	i	e	g	r	v	t	g	
Letter Name																													
Letter Sound																													

Total correct _____ of 26 names

Total correct _____ of 26 sounds

Rhyming Words

Use both the purple and yellow "Pictures for Rhyming Words Assessment" and follow the guidelines for administration. Put checkmarks in the grid below to indicate correct responses.

Rhyming Words Purple Series

1	2	3	4	5	6	7	8	9	10

Rhyming Words Yellow Series

1	2	3	4	5	6	7	8	9	10

Total correct _____ of 20 pictures

Matching First Sounds

Use the purple and yellow "Pictures for Matching First Sounds Assessment" and follow the guidelines for administration. Put checkmarks in the grid below to indicate correct responses.

Matching First Sounds Purple Series

1	2	3	4	5	6	7	8	9	10

Matching First Sounds Yellow Series

1	2	3	4	5	6	7	8	9	10

Total correct _____ of 20 pictures

Scoring Summary

Upper Case Letter Identification _____ Lower Case Letter Identification _____

Letter-Sound Identification _____

Rhyming Words _____

Matching First Sounds _____

Entered on website (Tick box) <input type="checkbox"/> Date entered on website _____

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Appendix H: Summary Score Sheet to Be Used After the Literacy Instruction

Summary Score Sheet After the Literacy Instruction

STEP Literacy Assessment® : After Literacy Instruction

Pre-Reading

Child Identification Number _____

Child Care Centre Number _____

Name of Assessor: _____ Date of Assessment: _____

Name Assessment

Ask the child to write her name on the lines below. If she writes only the first name, ask her to write the last name also. After the child finishes writing, ask her to show you the first and last letters in her name. For example, "Mary, can you show me the "m" in your name? Can you show me the "y" in your name? Then ask her to show you an additional letter, e.g., "Can you show me the "a" in your name?"

Scoring Rules

5	First and last names are spelled correctly Identifies the three letters in name May include a mixture of upper and lower-case letters Some letters may be reversed
4	First name is spelled correctly Identifies the three letters in name May include a mixture of upper and lower-case letters Last name is attempted and contains most letters Some letters may be reversed
3	Includes all or most letters in first name May not identify the three letters in name Most letters are formed correctly, but some may be slightly incorrect
2	Has one or two letters of first name May include additional letters not in first name
1	May include some letters that are not in first name May write shapes that resemble letters
0	Scribbles or makes no attempt

Upper Case Letter Identification

Using the "Upper Case Letter Identification" page, ask the child to point to and identify the upper-case letter names.

Indicate correct response with a ✓;

Indicate no response with a ●;

If a child responds incorrectly, record what she says.

	A	F	K	P	W	Z	B	H	O	J	U	C	Y	L	Q	M	D	N	S	X	I	E	G	R	V	T
Letter Name																										

Total correct _____ of 26 names

Child Identification Number _____

Child Care Centre Number _____

After

Lower Case Letter Identification and Letter-Sound Identification

Using the "Lower Case Letter Identification" page, ask the child to point to and identify the lower-case letter names.

If a child scores 15 or more, ask them to go through the list again and ask what sound each letter makes.

	a	f	k	p	w	z	b	h	o	j	u	a	c	y	l	q	m	d	n	s	x	i	e	g	r	v	t	g
Letter Name																												
Letter Sound																												

Total correct _____ of 26 names

Total correct _____ of 26 sounds

Rhyming Words

Use both the purple and yellow "Pictures for Rhyming Words Assessment" and follow the guidelines for administration. Put checkmarks in the grid below to indicate correct responses.

Rhyming Words Purple Series

1	2	3	4	5	6	7	8	9	10

Rhyming Words Yellow Series

1	2	3	4	5	6	7	8	9	10

Total correct _____ of 20 pictures

Matching First Sounds

Use the purple and yellow "Pictures for Matching First Sounds Assessment" and follow the guidelines for administration. Put checkmarks in the grid below to indicate correct responses.

Matching First Sounds Purple Series

1	2	3	4	5	6	7	8	9	10

Matching First Sounds Yellow Series

1	2	3	4	5	6	7	8	9	10

Total correct _____ of 20 pictures

Scoring Summary

Upper Case Letter Identification _____ Lower Case Letter Identification _____

Letter-Sound Identification _____

Rhyming Words _____

Matching First Sounds _____

Entered on website (Tick box) <input type="checkbox"/>
Date entered on website _____

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Appendix I: Assessment Quality Checklists

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Assessment Quality Checklist

Name Assessment

Fine	Needs More Practice	
		Finds a quiet place to do the assessments
		Establishes rapport with the child and makes them comfortable
		Performs standardized directions verbatim
		Responds to correct and incorrect responses as directed.
		Holds summary score sheet so child cannot see what (s)he records
		Records score immediately after assessment

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Assessment Quality Checklist
Letter and Letter Sound Identification

Fine	Needs More Practice	
		Finds a quiet place to do the assessments
		Establishes rapport with the child and makes them comfortable
		Performs standardized directions verbatim
		Holds blank paper over letter rows
		Responds to correct and incorrect responses as directed
		Holds summary score sheet so child cannot see what (s)he records
		If child does not respond in 5 seconds, prompts child to move on and scores 0
		Records the number of correct responses immediately after assessment

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Assessment Quality Checklist

Matching First Words

Fine	Needs More Practice	
		Finds a quiet place to do the assessments
		Establishes rapport with the child and makes them comfortable
		Performs the standardized directions to the child as per the administration directions
		Goes through the examples as described in the instructions
		Holds blank paper over rows of pictures
		Points to each picture while saying its name.
		Moves through pictures and questions promptly and clearly
		If child does not respond in 5 seconds, prompts child to move on and scores 0
		Responds to correct and incorrect responses as directed

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		Holds summary score sheet so child cannot see what (s)he records
		Records the number of correct responses immediately after assessment

Assessment Quality Checklist
Rhyming

Fine	Needs More Practice	
		Finds a quiet place to do the assessments
		Establishes rapport with the child and makes them comfortable
		Performs the standardized directions to the child as per the administration directions
		Goes through the examples as described in the instructions
		Holds blank paper over rows of pictures
		Points to each picture while saying its name.
		Moves through pictures and questions promptly and clearly
		If child does not respond in 5 seconds, prompts child to move on and scores 0
		Responds to correct and incorrect responses as directed
		Holds summary score sheet so child cannot see what (s)he records

		Records the number of correct responses immediately after assessment
--	--	--

Appendix J: Child Profile Form

Child Profile Form

Entered on website (Tick box) <input type="checkbox"/>
Date entered on website _____

1. Child Care Centre Identification Number _____

2. Child Care Centre Name _____

3. Child Identification Number _____

4. Please write in child's first name only _____

5. Please write in the age of the child (in months) _____

6. Is English the first language spoken in the child's home? Yes No

7. Is the child...? Male Female

8. Has this child received any English literacy instruction from parents or other people/organizations?

Yes No

9. Does this child have any special needs?

No

Yes --> Please describe the child's special needs.

10. Is the child in a subsidized child care space? Yes No

11. Is there or are there any other issue(s) with this child that would interfere with his/her literacy instruction?

No

Not Applicable - The child has not been selected for literacy instruction

Yes --> Please describe the issue(s).

12. In this question we would like you to rate the verbal, reading and writing literacy skills of this child for his/her age before the literacy instruction begins. So, please check the box below that indicates your rating of the literacy skills of this child before the literacy instruction begins. If you're not sure, please try and talk to someone who might know.

Verbal

Very low verbal literacy skills for his/her age	Somewhat low verbal literacy skills for his/her age	Average verbal literacy skills for his/her age	Somewhat high verbal literacy skills for his/her age	Very high verbal literacy skills for his/her age	Don't Know
---	---	--	--	--	------------

Reading

Very low reading literacy skills for his/her age	Somewhat low reading literacy skills for his/her age	Average reading literacy skills for his/her age	Somewhat high reading literacy skills for his/her age	Very high reading literacy skills for his/her age	Don't Know
--	--	---	---	---	------------

Writing

Very low writing literacy skills for his/her age	Somewhat low writing literacy skills for his/her age	Average writing literacy skills for his/her age	Somewhat high writing literacy skills for his/her age	Very high writing literacy skills for his/her age	Don't Know
--	--	---	---	---	------------

Appendix K: Instructor/Assessor Profile Form

Instructor/Assessor Profile Form

1. Child Care Centre Identification Number _____

2. Child Care Centre Name _____

3. Are you...? (Please circle)

1. A literacy instructor

2. A literacy assessor

3. Please write your instructor/assessor number _____

4. Please write in the child identification numbers for all the children you instructed or assessed.

--

5. Your age? _____

6. Your gender? (Please circle) Female Male

Entered on website (Tick box) <input type="checkbox"/>
Date entered on website _____

7. Your level of education? (Please circle the number)

1. Less than Grade 9

2. Some secondary school

3. High school graduate

4. Some postsecondary

5. Postsecondary certificate or diploma → Which certificate(s) or diploma(s)? _____

6. Bachelor's degree

7. Above bachelor's degree

8. Have you worked a year or more in child care?

Yes→ How many years have you worked in child care? _____

No→ How many months have you worked in child care? _____

9. How would you rate the written material we've developed for this project? (Please circle)

Poor Fair Good Excellent

10. How would you rate the literacy training we've developed for this project?

Poor Fair Good Excellent

11. How would you rate the project overall (the training, the assessments, the written material etc.)?

Poor Fair Good Excellent

The next question is for Instructors only.

12. Have you ever provided formal instruction (like the instruction for this literacy training) to children before?

Yes→What type of instruction?-

No

The next question is for Assessors only.

13. Have you ever done formal assessments (like the assessments for this program) of children before?

Yes→What type of assessments?-

No

Appendix L: Child Care Centre Profile Form

Child Care Centre Profile Form

1. Child Care Centre Identification Number _____

2. Child Care Centre Name _____

3. How many children are enrolled full-time in your child care centre? _____

4. How many children are enrolled part-time in your child care centre? _____

5. How many children were born in 2004, will be turning four years of age in 2008 and are eligible to enter Junior Kindergarten in September, 2008? _____

6. How many children who were born in 2004, will be turning four years of age in 2008 and are eligible to enter Junior Kindergarten in September, 2008 will be receiving the literacy training?

6. How many children who were born in 2004, will be turning four years of age in 2008 and are eligible to enter Junior Kindergarten in September, 2008 will NOT be receiving the literacy training? _____

Entered on website (Tick box) <input type="checkbox"/>
Date entered on website _____