

HEINEMANN

## Leveled Literacy Intervention (LLI)

### Reading Progress for Special Education LLI students

2009–2010

#### Student Characteristics

Out of the total *LLI* student sample from Heinemann’s *LLI* Data Collection Project (2009–2010), 824 of the kindergarten through fifth-grade students were reported to have an IEP for Reading or other categories (SPED). Of this group, 69.9% were male and 30.1% were female, 63.1% were White, 15.9% were Hispanic, 15.5% were Black, 1.7% were Asian/Pacific Island, and 1.6% were Multi-Racial. As an indication of students’ economic status, information on free/reduced lunch was collected and 57.9% fell into this category. 11.9% of the children were English Language Learners. Refer to Table 1 for a summary of the SPED *LLI* student sample size by grade and refer to Table 2 for a summary of the student demographics.

Student Sample Size					
Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade
9.5% (n=78)	30.2% (n=249)	24.8% (n=204)	20.3% (n=167)	11.2% (n=92)	4.1% (n=34)

Table 1

Student Demographics								
% Male	% Female	% White	% Hispanic	% Black	% Asian/Pacific Island	% Multi-Racial	% Free/Reduced Lunch	% English Language Learners
69.9% (n=576)	30.1% (n=248)	63.1% (n=520)	15.9% (n=131)	15.5% (n=128)	1.7% (n=14)	1.6% (n=13)	57.9% (n=477)	11.9% (n=98)

Table 2

Of the total group of SPED *LLI* students, 60.2% (n = 496) had individualized education plans that mandated that they receive support for Reading and 84.0% (n = 692) of the *LLI* students had an IEP for other support services; 44.2% (n = 364) of the SPED *LLI* students had an IEP for both Reading and other support services.

#### Results – Reading Progress

Below is a summary of the reading progress of the 824 students who had an IEP for Reading and/or other categories and received *LLI* during the 2009–2010 school year. Of the total group, 20 of the SPED *LLI* students did not complete the full set of sessions offered to them because they moved, withdrew or were switched to a different intervention and thus, their data were eliminated from the analyses reported below. Furthermore, some of the data submitted by the *LLI* teachers contained missing or incomplete information. The reported results below also exclude cases with missing data.

### **LLI Groups and Student Attendance**

LLI was designed to be delivered in a group of three students with one teacher, five days per week; however, delivery varied according to school and district limitations. Overall, each of the SPED LLI groups was comprised of between 1 and 5 students ( $M = 2.9$ ,  $SD = .7$ ) and the groups met between 2 and 5 days a week ( $M = 4.4$ ,  $SD = .8$ ) for 30 minutes per session (see Table 4).

The SPED LLI students who completed the full set of LLI sessions offered to them and for whom attendance information was available received LLI for an average of 18.5 weeks (range: 2-37,  $SD = 8.8$ ) and they attended an average of 62.3 LLI lessons (range: 7-167,  $SD = 31.8$ ) (see Table 4). It should be noted, however, that many students were not able to receive the full intervention as the school year ended and their LLI teachers indicated that they would receive more LLI the following year.

### **Reading Progress**

The data were collected and reported for SPED LLI students only. No control group was identified and assessed and therefore, the SPED LLI student growth was compared to Fountas and Pinnell grade level criteria (see Table 3) to assess the group's progress. Each student's reading progress was determined by looking at their pre- and post- LLI instructional reading levels (ranging from Pre-A to Z) which are based on the Fountas and Pinnell leveled text system.

- *Obtaining Fountas and Pinnell Instructional Reading Levels*

The Fountas and Pinnell instructional reading levels were obtained through the teachers' reports of their students' instructional reading levels which were determined by administration of the Fountas & Pinnell *Benchmark Assessment System* or Reading Records or by the conversion to Fountas and Pinnell levels of the teacher's reports of their students' scores on other reading assessments including the *DRA* or *DRA2*, the *Reading Recovery Observation Survey* with Running Records, and the *Rigby Benchmark*.

- *Conversion to Time Equivalent (TE) Score*

Once each child's instructional level at entry and exit was obtained, the levels were converted to a Time Equivalent (TE) score which represents the number of months of school a typically progressing student is expected to have completed when they demonstrate the reading behaviors associated with each level according to Fountas and Pinnell guidelines. The TE scores represent the number of months the student was in school and are based on a ten-month school year because children are not in school for two months of each year. If an instructional reading level is expected over more than one month, the TE score reflects the middle point of the expected band of time that the particular level is expected (see Table 5). For example, level C is expected at months eight, nine, and ten during Kindergarten and the time equivalent for level C is month nine.

- *Calculating Reading Gain*

The difference between the entry and exit TE score reflects the gain (number of months of progress) the student made between entry and exit from LLI. For example, a student who enters LLI at level A and exits at level C has progressed from what is expected in the fourth month of Kindergarten to what is expected in the ninth month of Kindergarten and thus, the student's reading gain is five months.

**Fountas and Pinnell Instructional Level Expectations for Reading  
and Time Equivalent Scores (months) for each Level**

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10
Kindergarten	Pre-A TE=2	Pre-A TE=2	Pre-A TE=2	A TE=4	A/B TE=5	B TE=6.5	B TE=6.5	C TE=9	C TE=9	C TE=9
1st Grade	C/D TE=11	D TE=12	E TE=13	E/F TE=14	F TE=15	G TE=16	G/H TE=17	H TE=18	I TE=19.5	I TE=19.5
2nd Grade	I/J TE=21	J TE=22.5	J TE=22.5	J/K TE=24	K TE=25	K/L TE=26	L TE=27.5	L TE=27.5	M TE=29.5	M TE=29.5
3rd Grade	M/N TE=31	N TE=33	N TE=33	N TE=33	O TE=36	O TE=36	O TE=36	P TE=39	P TE=39	P TE=39
4th Grade	P/Q TE=41	Q TE=43	Q TE=43	Q TE=43	R TE=46	R TE=46	R TE=46	S TE=49	S TE=49	S TE=49
5th Grade	S/T TE=51	T TE=53	T TE=53	T TE=53	U TE=56	U TE=56	U TE=56	V TE=59	V TE=59	V TE=59

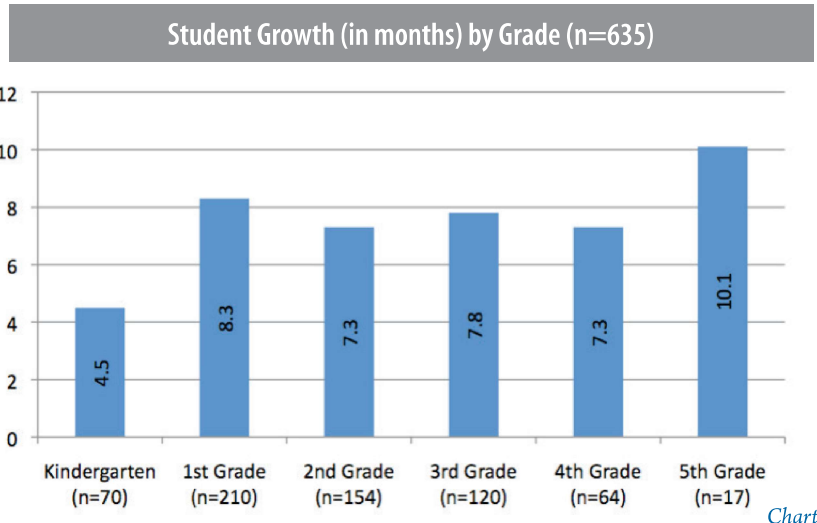
Table 3

Overall, the SPED LLI students progressed an average of 7.5 months ( $n = 635$ ,  $SD = 4.6$ ) from entry until exit from LLI. This growth was achieved during participation in LLI for an average of 18.5 weeks. It should be noted that while the LLI teachers strived to provide all scheduled LLI lessons each week, vacation and absentee days often made this impossible. In spite of this, the SPED LLI students progressed an average of seven and a half months in a little more than four and a half months. At most grade levels, the SPED LLI students moved forward at an accelerated pace when compared to typical reading progress over time according to Fountas and Pinnell guidelines (see Table 4 and Chart 1 below).

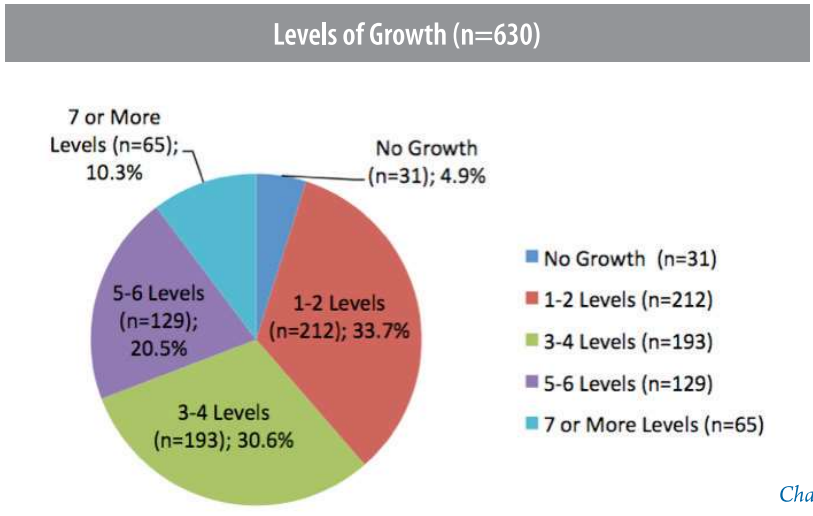
**Average Number of Students in Group, Average Number of Weeks of LLI, Average Number of LLI Lessons per Week, Average Number of LLI Lessons, and Average Student Growth in Months, by Grade**

	Average # of Students in Group	Average # of Weeks of LLI	Average # of LLI Lessons Per Week	Average # of LLI Lessons	Average Student Growth in Months
Kindergarten	M = 2.9 n = 77 SD = .7	M = 14.1 n = 70 SD = 5.9	M = 4.4 n = 69 SD = .8	M = 51.6 n = 70 SD = 22.7	M = 4.5 n = 70 SD = 2.4
Grade 1	M = 3.0 n = 240 SD = .6	M = 19.9 n = 211 SD = 9.1	M = 4.7 n = 214 SD = .6	M = 70.1 n = 211 SD = 34.1	M = 8.3 n = 210 SD = 4.6
Grade 2	M = 2.9 n = 190 SD = .8	M = 19.1 n = 161 SD = 8.3	M = 4.4 n = 163 SD = .8	M = 64.7 n = 162 SD = 31.3	M = 7.3 n = 154 SD = 4.2
Grade 3	M = 3.0 n = 164 SD = .8	M = 19.3 n = 116 SD = 9.2	M = 4.2 n = 121 SD = .8	M = 57.9 n = 119 SD = 31.0	M = 7.8 n = 120 SD = 5.2
Grade 4	M = 3.0 n = 92 SD = .8	M = 17.0 n = 65 SD = 9.0	M = 4.2 n = 61 SD = .8	M = 53.2 n = 56 SD = 29.8	M = 7.3 n = 64 SD = 4.2
Grade 5	M = 2.8 n = 33 SD = .8	M = 15.8 n = 17 SD = 9.2	M = 4.1 n = 14 SD = .7	M = 46.5 n = 17 SD = 21.0	M = 10.1 n = 17 SD = 8.0
Grades K-5	M = 2.9 n = 796 SD = .7	M = 18.5 n = 640 SD = 8.8	M = 4.74 n = 642 SD = .8	M = 62.3 n = 635 SD = 31.8	M = 7.5 n = 635 SD = 4.6

Table 4



The instructional reading level gain for the *LLI* students is depicted in Chart 2 below. Out of the total group, 61.4% of the *LLI* students demonstrated an instructional reading level at least three levels higher than their pre-*LLI* level and 10.3% raised their reading skills seven or more levels, which in all grades represents more than a year's progress (see Chart 2).



The results reported for the SPED *LLI* students are extremely positive given the variation in the grade level of students, the degree to which they were reading below grade level, and the variability of delivery. Only a small percentage of students made no growth and 61.4% made considerable progress.

## Key Findings

- On average, the 824 Special Education *LLI* students demonstrated reading progress over the span of time they participated in the intervention which is comparable to expected reading progress over seven and a half months during the school year. This progress was achieved during participation in *LLI* for an average of 18.5 weeks.
- Post-*LLI*, 61.4% of the Special Education *LLI* students demonstrated an instructional reading level at least three levels higher than their pre-*LLI* level and 10.3% raised their reading skills seven or more levels.

## Conclusions

Results of this evaluation indicate that as a group, the 824 Special Education struggling readers who received *Leveled Literacy Intervention* supplementary instruction demonstrated accelerated progress over the period they received *LLI* (Fountas and Pinnell 10-month guidelines). These results suggest that *LLI* is an effective short-term intervention for struggling readers who have an IEP for Reading or other categories.