

Evaluation of the Action Learning Systems
2003-2004 Learning Tree™ Intervention Services in LAUSD Schools
March 2004

PURPOSE OF EVALUATION

The purpose of this document is to provide the Program Evaluation and Research Branch (PERB) with a report of the preliminary evidence of effectiveness of the Action Learning Systems, Inc., Learning Tree™ School Intervention Systems for Reading/English Language Arts and Mathematics being provided to the Beyond the Bell Extended Learning Program of the Los Angeles Unified School District (LAUSD).

This report presents the preliminary evaluation of ALS program services for the Learning Tree™ School Intervention Programs as follows:

- Background of implementation of the program
- Description of the services provided and to whom they were provided
- Related research studies
- Evaluation design and methodology used
- Description of how program implementation and outcomes were measured
- Report of outcomes of the ALS program services including analyses of the data from multiple assessments
- Conclusions and recommendations

BACKGROUND

Action Learning Systems, Inc., (ALS) began working with Beyond the Bell (BTB) during the spring of 2003 to implement a Supplemental Educational Services program in the LAUSD. During 2003-04, ALS provided the Learning Tree™ Intervention System to students in grades K-5 and 6-8 in a Saturday school setting at Bancroft Elementary School, Adams Middle School and Mulholland Middle School. At this time, March 2004, ALS is providing Reading/Writing and Mathematics Learning Tree™ Intervention services to 23 sites in several Local Districts of the LAUSD.

ALS has contracted a third-party evaluation with Sims and Associates Educational Services and is currently implementing an organization-wide accountability system that includes a thorough evaluation of the Learning Tree™ School Intervention Programs. We plan to produce the final report on all the services ALS provides to the LAUSD by September 2004.

Therefore, this document provides only a *preliminary* account of the Supplemental Services to the Beyond the Bell (BTB) Extended Learning Programs Division.

Action Learning Systems is a California corporation providing whole school reform and school and district level intervention to low-performing schools throughout the state. ALS has a strong reputation and a powerful record of results in assisting schools to meet their sub-group “Annual Measurable Objectives” under the requirements of the No Child Left Behind Act (NCLB). ALS has been approved by PERB for a Master Contract with the LAUSD based on two separate third-party evaluations—one for 2000-2002 and the other for 2002-2003.

ALS has three offices in California—Monrovia, Sacramento and Modesto—currently including 52 full-time employees. Many of these employees provide Supplemental Services to students in both Los Angeles and the Stockton Unified School Districts.

Other Evidence of ALS Supplemental Services

ALS has developed a national reputation for its work with both Supplemental Services and after-school intervention programs. Kit Marshall, Ph.D., the President of ALS, has served on national panels sponsored by the U.S. Department of Education in the area of Supplemental Services. Dr. Marshall will be the featured speaker on a national teleconference on Supplemental Services presented by the DOE at the end of March.

The California Department of Education evaluated ALS’s capacity to provide supplemental services in 2002-2003 and again in 2003-2004. Those evaluations led to the California State Board of Education (SBE) approval of ALS to provide supplemental services throughout the state to students who were attending chronically low-performing schools as defined by the ESEA Title I Program of the NCLB.

The Learning Tree™ Intervention System was explicitly developed to provide California content standards-based reading/English language arts and mathematics tutoring services to K-8 students in schools that qualified for Supplemental Services. The Learning Tree™ Intervention System was launched during 2003 in several school districts throughout the state. Each of these districts and the students they serve have similar demographic characteristics to those of LAUSD.

School Districts Receiving ALS Supplemental Services

In 2002, the LAUSD requested ALS to exclusively provide Supplemental Services to the District under the Beyond the Bell (BTB) Extended Learning Program/Supplemental Services programs. For that reason, ALS is working only through the BTB program in the LAUSD.

ALS introduced the Learning Tree™ Intervention System to LAUSD during the 2002-03 school years when ALS began Saturday school services at Bancroft Elementary School, Adams and Mulholland Middle Schools. During the November 2003- February 2004 intervention session, service at Adams and Mulholland Middle schools continued and BTB added Language Arts services to Le Conte, King, Burbank, and Olive Vista Middle Schools.

Elementary Schools that adopted the Saturday program included Magnolia, 112th and Evergreen Elementary Schools. The first Learning Tree™ Mathematics Extended Learning Academies were established at 14 middle school campuses during this time frame. BTB requested ALS to continue providing Learning Tree™ English Language Arts and Mathematics Supplemental Services during the second session of the Extended Learning Academies at 23 middle school campuses in the Los Angeles Unified School District. These decisions were made by BTB based on a number of factors, including program success determined by both qualitative and quantitative measures. The current number of LAUSD sites receiving services from ALS has grown many times over the initial number of school sites.

The Fairfield Suisun School District implemented the Learning Tree™ Elementary Language Arts Program as part of their 2003 summer school program in two schools, providing services for approximately 250, K-6 students.

During the 2003/2004 school years, Colton Unified School District provided after-school intervention services using the Learning Tree™ Language Arts component for 40 students, grades 2-6.

In 2003-04, the Stockton Unified School District initiated the Learning Tree™ Language Arts program in 30 schools K-6, for approximately 3000 students, as part of a ten-week intensive intervention pullout program during the school day for students performing below grade level. As of the date of this report, a third nine-week session is beginning.

Working in partnership with ALS, the LA's BEST After School program has implemented the Learning Tree™ K-5 Reading/English Language Arts Intervention System using rigorously trained high school tutors from Roosevelt High School. These tutors work after school with 50 third to fifth-grade students at Bridge Elementary School. While the final test data

have not yet been collected at Bridge Elementary since the program is in the final week of implementation, the staff reports¹ very impressive results.

Similarly, while most Learning Tree™ academies have not yet provided student outcome data, their teachers report that they have observed positive academic growth in all areas and expressed satisfaction in their students' progress.

Based on preliminary student achievement data and degrees of teacher satisfaction, Palm Springs Unified School District plans to implement the program during their summer school session for all grades—Kindergarten through eight. (See Appendix A for the district contact list.)

The data for Stockton USD and the LAUSD are currently being disaggregated and analyzed and a full report on these Supplemental Services will be available by April 2, 2004 to coincide with the CDE process for Supplemental Services provider applications.

DESCRIPTION OF SERVICES

The Learning Tree™ Intervention System for Reading/English Language Arts and Mathematics consists of a research-based curriculum and pedagogy aligned with the requirements of the No Child Left Behind Act of 2001 (ESEA). The law's requirements are based on the research findings of the National Reading Panel 2000² report *Teaching Children to Read*, the National Research Council the 1998 report *Preventing Reading Difficulties in Young Children*³, and *Put Reading First* (2001)⁴.

The studies cited above provide the conceptual basis for the of the Learning Tree™ Intervention System. The overall purpose of the program is to “close the achievement gap and ensure that the vast majority of students learn to read, write and compute at grade level and above.”¹ The Learning Tree™ Intervention System meets and exceeds recommendation for effective reading, writing, and mathematics extended learning support and Supplemental Services.

The Learning Tree™ K-5 Reading/English Language Arts Intervention System incorporates the five essential components of reading instruction: Phonemic Awareness, Phonics, Fluency, Vocabulary, and Comprehension plus writing in multiple genres. The Grades 6-8

¹ U.S. Department of Education NCLB Guidelines for Supplemental Services
<http://www.ed.gov/about/offices/list/oii/about/choice.html>

² National Reading Panel. (2000) *Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction*. Washington, D.C.: NICHD.

³ Snow, C.E., Burns, M.S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press

⁴ *Put Reading First* (2001) http://www.nifl.gov/partnershipforreading/publications/reading_first2.html

Reading/English Language Arts Intervention System provides intensive instruction in Reading Fluency, Vocabulary, Comprehension, and Genres of Writing. The Grades 6-8 Mathematics Intervention System provides students with focused research-based mathematics sequences in the areas of Number Sense and Algebra and Functions as specified in the California mathematics content standards.

The Learning Tree Intervention System was designed to meet the needs of all students including English-only, English language learners, and special education populations.

Universal Access research undergirds the entire Learning Tree™ Intervention System and includes Specially Designed Academic Instruction in English (SDAIE) strategies. These strategies are integrated throughout the Instructional Sequences of each level of both Reading/English language arts and Mathematics. (see Appendix B for detailed analyses of the alignment between NCLB requirements and examples of Learning Tree™ components).

In addition to the educational component, the Learning Tree™ System includes professional development for the Learning Tree™ teachers plus support and monitoring through the Learning Tree™ Site Monitors. (Appendix C provides the list of ALS and contractual personnel supporting the Learning Tree™ programs.)

At Mulholland Middle School a group of eight special education students was assigned to the Saturday program with one teacher and two special education assistants and a one-to-one assistant. The teacher immediately notified the Learning Tree™ Site Monitors that the middle school program was unsuitable for the student levels. A diagnosis was completed per child based on his or her IEP and the correct Learning Tree level was distributed to each child the following week. (See Appendix D for description of Scope and Sequence levels.)

RELATED RESEARCH SUPPORTING THE LEARNING TREE PROGRAMS

The Learning Tree curriculum evolved from extensive research conducted by researchers across the country. For example, the National Reading Panel (NRP) conducted a meta-analysis of the research on reading (Camilli, Vargas, and Yurecko, 2003)⁵. Those researchers reported a combination of phonics, language activities (reading strategies, self-monitoring, text handling

⁵ Camilli, G., Vargas, S., and Yurecko, M. (2003). *Teaching Children to Read: The fragile link between science and federal education policy. Education Policy Analysis Archives, 11*(15).

and oral interaction with teachers and peers) and tutoring proved three times more effective than phonics alone in improving student reading achievement. The study concluded that phonics is insufficient if not combined with language activities and tutoring.

Rosenshine and Meister (1994)⁶ reported that Reciprocal Teaching is one of the best-researched strategies available to teachers. Studies have shown that Reciprocal Teaching is more effective than basic skills instruction. In one study on Reciprocal Teaching, 70 percent of the students achieved criterion level. By comparison, among those students who received only basic reading skills instruction, only 19 percent achieved criterion level. Criterion level was defined as the ability to answer correctly seven of ten comprehension questions on four consecutive criterion-referenced assessments (Palinscar, David & Brown, 1989).⁷

According to the National Council of Teachers of Mathematics Professional Teaching Standards (NCTM, 1991),⁸ “Classroom discourse, the ways of representing, thinking, talking, agreeing, and disagreeing, is central to helping students develop mathematical understanding and skills.”

Classroom lessons are influenced by the kinds of conversations teachers want to have and believe are appropriate in the classroom (Bloome & Willett, 1991).⁹

In *Best Practice: New Standards for Teaching and Learning in America's Schools*, Zemelman (1998)¹⁰ states “Students need many opportunities to use language to communicate mathematical ideas. Discussing, writing, reading, and listening to mathematical ideas deepen students' understanding of mathematics.”

⁶ Rosenshine, B. & Meister, C. (1994) Reciprocal teaching: A review of the research. *Review of Educational Research*, 64, 4, 479-530.

⁷ Palinscar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction*, 1(2): 117-75

⁸ National Council of Teachers of Mathematics Professional Teaching Standards (1991), pg.34

⁹ Bloome, D., & Willett, J. (1991). Toward a micropolitics of classroom interaction. In J. Blase (Ed.), *The politics of life in schools: Power, conflict, and cooperation* pp. 207-236

¹⁰ Zemelman, Daniels, Hyde (1998) *Best Practice: New Standards for Teaching and Learning in America's Schools*, *Best Practice: New Standards for Teaching and Learning in America's Schools*, pg.91

METHODOLOGY: How the ALS Program was evaluated

This evaluation addresses three major evaluation questions:

1. What programs and services did ALS provide Beyond the Bell during the 2003-2004 school years?
2. To what extent did the students achieve the intended outcomes of Learning Tree services?
3. What effect did Learning Tree programs and services have on participants as evident from client surveys?

Evaluation Design

This preliminary evaluation utilized data from multiple measures of Learning Tree participant learning from the 2003-2004 winter session. The report includes only pretest and post-test comparisons of the participating students, since those are the only data available at this time. The full ALS evaluation plan includes a randomized control trials study to be conducted later in the year. That study will address the issue of regression toward the mean. The evidence examined below includes:

- ALS Reading Comprehension Test, Fluency Test, ALS Writing Assessment and Mathematics Assessment pretest and post-test scores,
- San Diego Quick Assessment pretest and post-test scores, and
- End-of-program surveys of Learning Tree teachers.

While ALS provided services to schools across California, this evaluation focuses on the services to and outcomes in LAUSD and Stockton only.

Action Learning Systems, Inc., contracted technical assistance from Sims and Associates Educational Services (SAES), to design and complete this evaluation. ALS employees collected and provided information on Learning Tree assessments, client schools, and survey results.

SAES examined, cross-validated and analyzed the data provided, and then checked and refined the evaluation report. Finally, ALS personnel reviewed the draft report for accuracy of ALS information, and SAES completed the final evaluation report.

Description of How Program Implementation and Outcomes were Measured

How We Measured Program Implementation

We measured the implementation of the Learning Tree programs through monitoring by ALS personnel, training evaluations, and a survey of Learning Tree teachers completed at the end of their program. Additionally, participating Beyond the Bell Academy administrators provided feedback, including a written letter, on their observations. The results of the teacher survey appear below.

How We Measured Outcomes

The intended outcomes targeted by the ALS academies varied depending on the program. The Learning Tree English Language Arts academies targeted improvement in attainment of the *California English Language Arts Standards* related to reading comprehension, fluency and writing. The mathematics academies targeted improvement in attainment of *California Mathematics Standards* related to either Number Sense or Algebra and Functions.

ALS contracted with external experts in English language arts and mathematics assessments to develop the tests used to measure achievement of these standards. These experts developed the ALS Reading Comprehension Test, the ALS Fluency Test, and the ALS Writing Assessment. (Appendix E provides samples of those tests).

The English Language Arts academies also used the *San Diego Quick Assessment*, a popular process that involves presenting the student with a set of graded word lists. The assessment accepts the student's correct pronunciation of words as evidence of word recognition ability.¹¹ (See Appendix F for a description of the San Diego Quick Assessment)

Students took the pretest the first week of the nine-week Learning Tree™ program and the post-test the last week of the program. To determine the effect of the academies, this report focuses solely on students with both pretest and post-test scores.

Table 1 identifies the intended outcomes and the assessment used per ALS program.

¹¹ See Scholastic website describing how to conduct this assessment:
http://teacher.scholastic.com/reading/bestpractices/fluency/pdfs/building_fluency_checkup.pdf

Table 1
ALS Programs, Intended Outcomes, and Outcome Indicators

ALS Program	Intended Outcomes	Assessments
Learning Tree™ Elementary School Intervention Program Services English/Language Arts	Increased reading comprehension, fluency, writing	Reading Comprehension, Fluency Test, Writing Assessment
Learning Tree™ Middle School Intervention Program Services English/Language Arts	Improved reading comprehension	Reading Comprehension Test
	Improved writing scores	Writing Assessment, San Diego Quick
Learning Tree™ Middle School Intervention Program Services Number Sense	Increased pre & post-test scores	Number Sense Test
Learning Tree™ Middle School Intervention Program Services Algebra and Functions	Increased pre & post-test scores	Algebra and Functions Test

RESULTS

Services of Program Provided

Evaluation Question 1. What programs and services did ALS provide Beyond the Bell during the 2003-2004 school years?

Action Learning Systems employees and contractual personnel (henceforth Learning Tree™ Site Monitors) were responsible for the implementation of the teacher training and staff development at the various school sites.

During the initial training, the Learning Tree™ Site Monitors provided training to the Beyond the Bell Saturday School teachers (LAUSD employees) with the following information:

- Purpose of the program
- Roles and responsibilities of school site administrators, Learning Tree™ Site Monitors, Saturday School teachers and students
- Week by week schedule for the nine-week program
- History and research of the Learning Tree™ programs
- Administration and collection of assessment tests
- Results from prior sessions and intended student outcomes
- Scope and sequence (see Appendix D) and how standards were chosen
- How to use tri-folders
- Training on research-based strategies (e.g. Reciprocal Teaching, Process Writing, Problem Solving)
- Step-by-step, hands-on instruction on how to facilitate the 1st and 2nd Instructional Sequences and how to use the accompanying manipulatives (see Appendix D)
- Questions and Answers

Subsequent professional development provided by Learning Tree™ Site Monitors for Beyond the Bell Saturday School teachers focused on research-based strategies and step-by-step, hands-on instruction on how to facilitate the remaining instructional sequences and use of the accompanying manipulatives for mathematics instruction.

Table 2 presents an outline of a sample of the type of monitoring, supervision, and support provided to the English language arts administrators and Beyond the Bell Saturday School teachers as part of the ALS services.

Table 2
SAMPLE Learning Tree™ Site Monitor Timeline and Responsibilities
(Dates may vary)

DAY	DATE	RESPONSIBILITIES
Training	Nov 8 FULL DAY	Beyond the Bell Saturday School teachers training. (See question 3 for detailed information.) Debrief with administrators
1	Nov 15 HALF DAY	Help distribute the materials to the teachers. Check inventory and place follow-up order if items are missing. Walk through each classroom for the purpose of collecting tests and scantrons, check for faithful replication of the strategies and answer general program questions. Debrief with administrators
2	Nov 22 HALF DAY	Help distribute new materials to the teachers. Check that material is placed correctly in binders. Check inventory and place follow-up order if items are missing. Walk through each classroom for the purpose of checking for faithful replication of the strategies and answer general program questions. Demo the strategies, if requested. Collect any new pre-tests for students who did not show up that first week. Debrief with administrator and discuss ways to make the process smoother next time.
3	Dec 6 HALF DAY	Beyond the Bell Saturday School teachers Staff Development (See question 3 for detailed information.)
4	Dec 13	Optional Day
5	Dec 20	Optional Day
6	Jan 10 FULL DAY	Walk through classrooms observing teachers and ensuring faithful replication of the strategies. Beyond the Bell Saturday School teachers Staff Development. (See question 3 for detailed information.) Debrief with administrators
7	Jan 24 HALF DAY	Help distribute the materials to the teachers. Check inventory and place follow-up order if items are missing. Walk through classrooms observing teachers and ensuring faithful replication of the strategies. Debrief with administrators
8	Jan 31	Optional Day
9	Feb 7 HALF DAY	Walk through each classroom for the purpose of collecting tests and scantrons, an answer general program questions. Debrief with administrators
Continuous	Scott Houston Learning Tree™ Coordinator	<ul style="list-style-type: none"> o Available by cell phone to take any calls about questions concerning Learning Tree™ sites. o Roving between the school sites. He will visit approximately 3 schools every Saturday. o Sent materials to school sites. o Continuous communication with site administrators to ensure quality of program.

Learning Tree™ Site Monitors were expected to:

- Conduct 10 hours of teacher training on the Learning Tree™ program.
- Walk through classrooms observing teachers and ensuring faithful replication of the strategies.
- Create a strong rapport with site administrators.
- Collect all data in regards to the Learning Tree™. This includes test booklets, scantrons, and an attendance report at the end of the session.
- Be on site six Saturdays out of the nine weeks.
- Insure that the materials got to the teachers. If there were not enough materials take inventory and make sure enough materials were available following week.
- If asked, demonstrate these strategies in the classroom.

Evaluation Question 2. To what extent did the students achieve the intended outcomes of Learning Tree services?

Reading Outcomes

At this time, we can estimate the attainment of the intended reading outcomes for the elementary school academies based on the pretest and post-test scores for the Learning Tree program at Magnolia Elementary School. That academy submitted pretest and post-test English Reading Comprehension scores for 82 students and Fluency Test scores for 73 students. Table 3 provides descriptive statistics for those results.

Table 3
Pretest and Post-test Result of the Learning Tree™
Elementary School English Reading Comprehension and Fluency Tests

Reading Comprehension	Pretest	Post-test	Change
	Number = 82		
Average	74	83	10
Minimum	0	19	-7
Maximum	156	184	90
Medium	76	85	9
Mode	92	92	0
Standard Deviation	19	16	12
Fluency	Pretest	Post-test	Change
	Number = 73		
Average	77	101	24
Minimum	0	0	-90
Maximum	317	247	178
Medium	69	97	23
Mode	65	92	17
Standard Deviation	50	45	31

The changes between pretest and post-test scores showed improvement in the student's proficiency in reading comprehension and fluency. On the reading comprehension tests, the students averaged an improvement of 10 points, almost equal to the standard deviation of change. The lowest score on the reading comprehension pretest was zero, while the post-test low rose to 19.

Student fluency increased as well with the average student attaining a post-test of 101, up from 77. The fluency test scores showed some problems, with some zero scores

at both pretest and post-test, suggesting a problem with the test rather than the learning. Further research will be conducted on the tests to ensure reliability and validity.

Overall, the students who attended the nine-week Learning Tree™ English-Language Arts program improved their reading comprehension and fluency, although the difference between the pretest and post-test means failed to reach statistical significance. While these results represent the outcome for only a subset of the students in the Elementary Learning Tree™ academies, they provide a valuable estimate of the effect of the academies.

Elementary School Writing Assessment

In Stockton Unified School District elementary school academies also assessed their students' writing using a prompt and scoring process based on the Golden State Exams writing assessment protocols.

Four elementary schools (Pulliam, Valenzuela, Commodore Skills, and August Elementary Schools) provided writing assessment scores for a total of 65 students. Table 4 provides the results of those writing assessments. The writing samples received a rubric score from 1 to 5, with 1 being the lowest possible score and 5 the highest writing performance.

Table 4

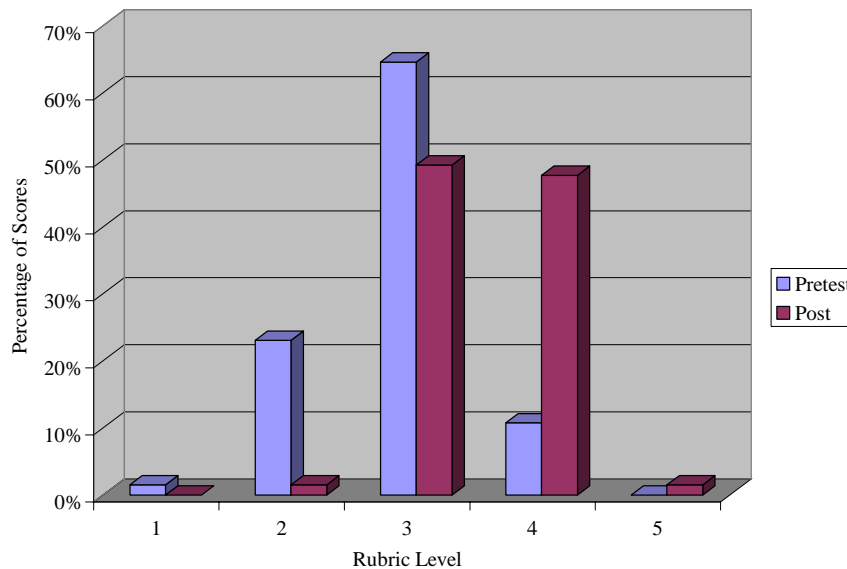
Pretest and Post-test Elementary School Writing Assessment Results
March 2004

Writing Rubric Score	Pretest	Post-test Percent	Change
1	2%	0%	-2%
2	23%	2%	-22%
3	65%	49%	-15%
4	11%	48%	37%
5	0%	2%	2%
Total	0%	0%	0%
Number = 65			

Figure 1 contrasts the distribution of these scores at pretest and post-test, showing the improvement after less than nine weeks of the Learning Tree program. The percentage of student writing scoring at the lowest levels of 1, 2, and 3 dropped while

those scoring at the higher levels of 4 and 5 increased by 39 percent, a marked improvement.

Figure 1
Changes in Writing Achievement at Middle School Learning Tree ELS Academies



This chart highlights the very desirable changes in writing proficiency: the percentage of student writing scoring at the lowest levels of 1, 2, and 3 dropped while those scoring at the higher levels of 4 and 5 increased by 39 percent, a marked improvement.

Middle School Outcomes

Four middle schools provided pretest and post-test data to support preliminary estimates of the effect of the Middle Schools Learning Tree™ English/Language Arts academies. Le Conte, King, Olive Vista and Burbank Middle Schools provided Learning Tree™ English/Language Arts academies to over 400 students. They submitted pretest and post-test English Reading Comprehension scores for 137 students.

Table 5 presents the results of those pretest and post-test assessments.

Table 5

Pretest and Post-test Average Percent Correct on the Middle School Learning Tree™ English Reading Comprehension Test March 2004

Reading	Pretest	Post-test	Change
Average	39.7%	43.3%	3.6%
Minimum	11.43	14.29	-34.28
Maximum	82.86	85.71	37.14
Median	37.14	42.86	2.86
Mode	34.29	34.29	0
Standard Deviation	15.6	15.7	13.6
Number = 137			

While the 137 students averaged slightly less than 4 point gain from pretest to post-test, six out of 10 students in the Learning Tree™ English/Language Arts program showed an improvement in their scores. A *t* test of these differences discerned no statistical significance between these two sets of scores.

ALS will conduct further research on these tests to ensure the validity and reliability of these assessments. The forthcoming evaluation will also examine the effect of these academies evident other assessment data such as the CAT6 and California Standards Tests for the participating schools.

Middle School San Diego Quick Assessment

Four schools provided pretest and post-test results for the San Diego Quick assessment of word fluency: Olive Vista, Le Conte, Luther Burbank, and King Middle Schools. Table 6 provides the descriptive statistics followed by the more useful information on the distribution of the ordinal data from Grade 1 to 12.

Table 6

Pretest and Post-test Results on the San Diego Quick Assessment for Middle School Learning Tree English Language Arts Programs March 2004

Reading	Pretest	Post-test	Change
Average	6.3	7.7	1.4
Minimum	1	3	-1
Maximum	11	12	8
Median	6	8	1
Mode	7	7	2
Standard Deviation	1.9	2.0	1.5
Number = 110			

Table 6 (Continued)

Pretest and Post-test Results on the San Diego Quick Assessment for
Middle School Learning Tree English Language Arts Programs

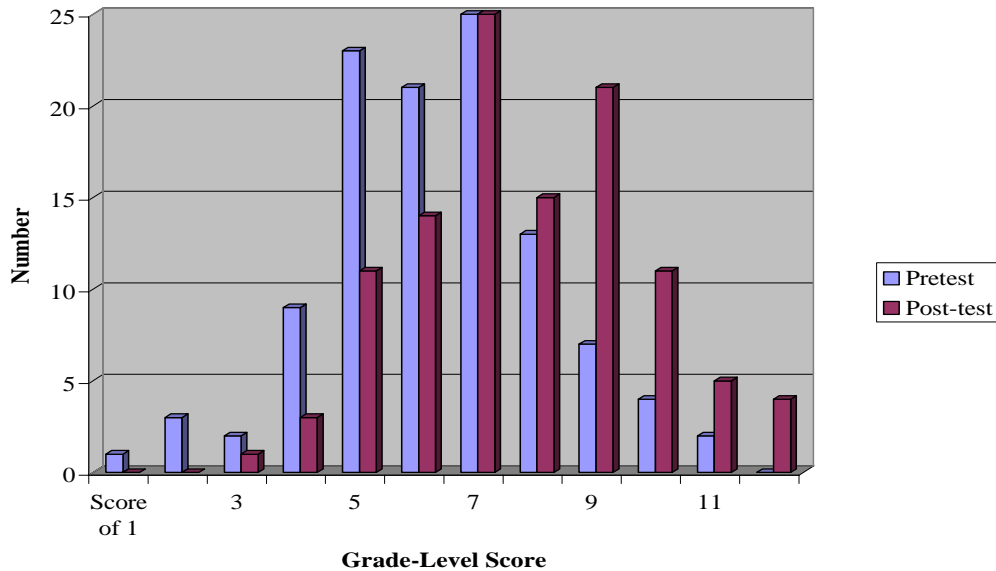
Grade Level	Pretest Number	Post-test Number	Change
1	1	0	-1
2	3	0	-3
3	2	1	-1
4	9	3	-6
5	23	11	-12
6	21	14	-7
7	25	25	0
8	13	15	2
9	7	21	14
10	4	11	7
11	2	5	3
12	0	4	4
Grade Level	Percent	Percent	Change
1	1%	0%	-1%
2	3%	0%	-3%
3	2%	1%	-1%
4	8%	3%	-5%
5	21%	10%	-11%
6	19%	13%	-6%
7	23%	23%	0%
8	12%	14%	2%
9	6%	19%	13%
10	4%	10%	6%
11	2%	5%	3%
12	0%	4%	4%

These scores indicate the grade level of the list that the student pronounced accurately. While the differences do not attain statistical significance, the improvement certainly represents educationally significant growth over nine weeks.

Figure 2 presents a bar chart of the pretest and post-test grade-level scores.

Figure 2

Pretest and Post-test Middle School San Diego Quick Assessment Results for Middle School Learning Tree™ English Language Arts Programs



As can be seen from the above results, students participating in the middle school Learning Tree Language Arts programs improved their word recognition at least one grade level. Overall, the number of students scoring at the lowest grade levels dropped while the number of students successfully pronouncing the vocabulary of higher grade levels increased.

Middle School Writing Outcomes

The three middle schools discussed above (Olive Vista, Le Conte, Luther Burbank, and King Middle Schools) also submitted pretest and post-test writing samples for their participating students. These samples were scored by an external scoring agency.

Table 7 presents the basic statistics for those scores as well as the distribution of scores from the lowest possible score of 1 being attained by 10 percent of the students at pretest but by only two percent at post-test.

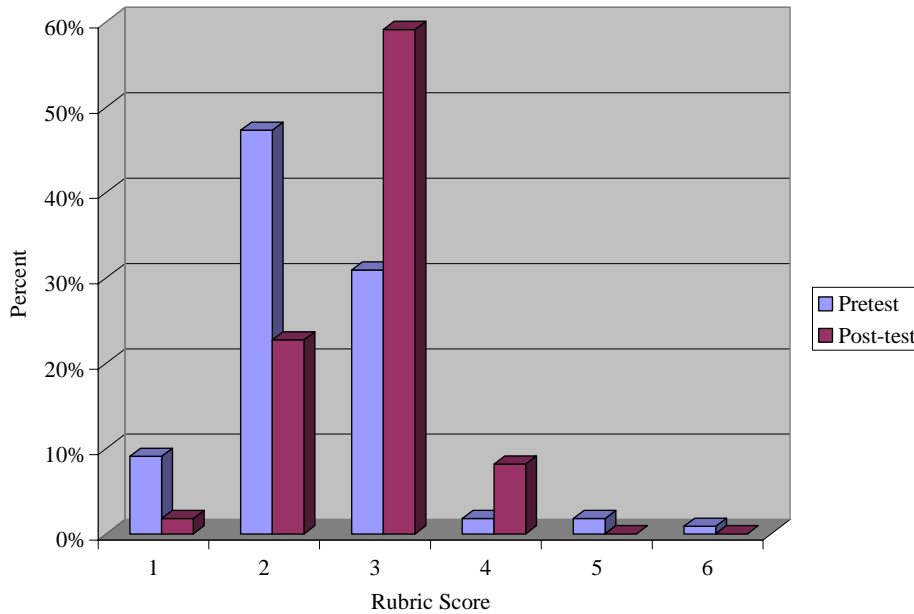
Table 7
 Pretest and Post-test Middle School Writing Assessment Results
 March 2004

Writing Rubric Score	Pretest Percent of Students Receiving Score	Post-test Percent of Students Receiving Score	Change
1	10%	2%	-8%
2	51%	25%	-27%
3	34%	64%	31%
4	2%	9%	7%
5	2%	0%	-2%
6	1%	0%	-1%
Total	100%	100%	
Number	101		

Vast majority of the participating students demonstrated improved writing skills despite the short duration of the program. The percentage of writing samples scoring at the lowest and very highest rubric levels dropped. The three students who attained the scores of 5 or 6 wrote papers that received lower scores at post-test. The decline might be the effect of the change in the writing prompt or result of a drop in motivation.

Figure 3 presents a bar chart of the pretest and post-test writing scores. It shows the dramatic shift up from rubric level 2 to 3 and a smaller percentage of scores shifting from 3 to 4.

Figure 3
**Changes in Writing Achievement at Middle School
 Learning Tree™ ELS Participants
 March 2004**



Again, students participating in the Learning Tree English Language Arts (ELA) academies demonstrated important learning from the beginning to the end of their brief program.

Middle School Mathematics Outcomes

The Learning Tree™ Middle School Number Sense Academy submitted pretest and post-test scores for 629 middle school students. The Algebra and Functions Academies provided pretest and post-test scores for 138 middle school students. These students attended the Learning Tree™ Math Academies at one of the following sites: Adams, Berendo, Bethune, Byrd, Carver, Drew, Edison, LA Academy, Le Conte, Luther Burbank, Maclay, Sun Valley, or Virgil Middle Schools. Table 8 presents the results of those pretest and post-test assessment.

Table 8
Pretest and Post-test Scores on the
Middle School Learning Tree™ Mathematics Test

Mathematics	Pretest	Post-test	Change
Algebra and Functions	Number = 134*		
Average	33.2	39.6	6.4
Minimum	0.0	0.0	-55.6
Maximum	88.9	100.0	77.8
Medium	33.3	33.3	11.1
Mode	33.3	33.3	11.1
Standard Deviation	17.4	18.9	22.5
Number Sense	Number = 627		
Average	33	39	6
Minimum	5	3.3	-41.7
Maximum	80	83.3	46.7
Medium	30	36.7	5
Mode	25	36.7	5
Standard Deviation	13.6	13.0	15.1

* (W+ = 4306, W- = 2135, N = 113, p <= 0.001881; effect size = .35)

The 125 students with pretest and post-test score for Algebra and Functions averaged a gain of more than 5 points. A Wilcoxon Matched-Pairs Signed-Ranks test of statistical significance of the difference between the pretest and post-test produced highly statistically significant results (the probability of the differences between the two tests occurring by chance was less than .002). This means that these 125 middle school students in the Learning Tree Algebra and Functions academies significantly improved in Algebra and Functions after their nine-week academy. The effect size is .35.

The 629 students who completed the nine-week Learning Tree™ Number Sense Math program demonstrated an average of 6.0 points improvement from pretest to post-test on the Number Sense Math Assessment Test. The 65% of the students improved their scores from the beginning to the end of their nine-week Learning Tree™ Math program. However, the difference between the means of the pretest and post-test scores failed to reach statistical significance in either a *t* test of pairs or the Wilcoxon Matched-Pairs Signed-Ranks.

Program Implementation Evidence

Evaluation Question 3. What effect did Learning Tree programs and services have on participants as evident from client surveys?

ALS personnel monitored the implementation of every Learning Tree academy. As part of this monitoring they conducted informal interviews of school administrators and teachers to determine whether the program was being implemented as planned. Additionally ALS conducted a survey of the Learning Tree teachers. The following two tables present the results of the teacher surveys.

Table 10 highlights the analysis of the teacher evaluation component of the Middle School Extended Learning Math Academies that includes quantitative and qualitative information

Implementation of Learning Tree Program as Evidenced by Teacher Surveys

Twenty-two middle school teachers completed surveys after implementing Middle School Math Academies using the Learning Tree Program. Additionally, 24 elementary school teachers completed surveys at the end of the K-5 Learning Tree Program. The surveys asked teachers if they had received adequate training, information on standards alignment, materials, and coaching support prior to, and during implementation. Both surveys were designed using a Likert scale with responses ranging from “Strongly Agree, to “Not Applicable.”

Table 9 presents the results of the middle school math survey and Table 10 shows the results for the elementary survey. Teachers also had the opportunity to respond to open-ended questions and to write comments. Sample comments and suggestions are presented following each table.

Table 9**Results of the Teacher Evaluation Component Middle School Math Academies**

		Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure	Not Applicable	
1	I have received enough training to implement this program	12	8	0	1	1	0	22
		55%	36%	0%	5%	5%	0%	100%
2	I have received adequate information on how the Learning Tree™ aligns to standards and No Child Left Behind.	10	10	1	1	0	0	22
		45%	45%	5%	5%	0%	0%	100%
3	I have had the strategies demonstrated to me well enough so that I could replicate them in the classroom.	11	8	2	1	0	0	22
		50%	36%	9%	5%	0%	0%	100%
4	Learning Tree™ Site Monitors visited my classroom frequently and asked if I had any questions or concerns.	11	7	3	1	0	0	22
		50%	32%	14%	5%	0%	0%	100%
5	Learning Tree™ Site Monitors were courteous and professional.	18	4	0	0	0	0	22
		82%	18%	0%	0%	0%	0%	100%
6	Learning Tree™ Site Monitors presented the trainings in a clear and practical manner.	17	5	0	0	0	0	22
		77%	23%	0%	0%	0%	0%	100%
7	Learning Tree™ Site Monitors were knowledgeable about the sequences and strategies	16	6	0	0	0	0	22
		73%	27%	0%	0%	0%	0%	100%

Middle-School Results of Survey

The Teacher Evaluation Component of the Learning Tree Program strongly suggests that teachers were adequately prepared and provided with coaching and support to effectively implement the supplemental program. Ninety-one percent of the teachers reported that they had received adequate training (“Strongly-agree” and “Agree”) to implement the program. When asked if they had adequate information on alignment of the program to the NCLB standards, 90 percent of the teachers responded “yes” (“Strongly-agree” and “Agree”). Eight-six percent of the teachers felt that they had seen the strategies modeled well enough to implement them in their classrooms. The Learning Tree Site Monitors

visited the classrooms for coaching frequently (82 percent of teachers responded “Strongly-agree” and “Agree”). Three of the seven questions related to the training ability and knowledge of the ALS trainers. Teachers responded positively to the courtesy and professionalism of the ALS staff (100 percent). All of the teachers reported that the training was presented in a clear and practical manner and that the Site Monitors were knowledgeable about the sequences and strategies.

Eight of the twenty-two teachers who completed the survey also responded to the open-ended question “If you have disagreed with any of the statements above please explain why and what could be done in the future to improve our training or services.” Suggestions or comments included:

- Please send learning unit “prior” to class meeting so teachers can familiarize us a head of time.
- It would help to speed up the pace and teacher efficiency if the ALS rep was here every Saturday.
- Great program! I have been teaching 7th & 8th grade math for 10 years. This is the most interested I have seen the kids, especially when the kids are here for at least three hours.
- Great program but needs refinement. When we are trained we should be given all materials for all sequences and it should be a 16-hour training.
- Strategies demonstrated in advance were helpful. However, not all were demonstrated in advance.
- Students did not have a strong grasp of basics, multiplication, division, addition, subtraction. This is such a great program, but students do not benefit due to lack of basic knowledge. Teaching them the basics is taking time away from the program.
- ALS staff was excellent, need to see them more. Very, very helpful at trainings.
- I feel that a bit more training would have been helpful, especially with the different manipulatives, etc.

These comments from teachers will be helpful to ALS staff in improving service to the middle school teachers who work with The Learning™ Tree program. Additionally, Alan Scher, the administrator of the Byrd Middle School Extended Learning School Academy was highly complimentary of the support teachers received from ALS staff in their implementation of the Learning Tree Program. His letter may be found in Appendix G (personal letter from Alan Scher, Byrd Middle School)

In summary, the Math Academy Beyond the Bell Saturday School teachers were very pleased with the program and all (100 percent) strongly agreed or agreed that the Learning Tree™ Site Monitors were courteous, knowledgeable and provided clear and practical trainings. The qualitative data and quantitative data substantiate the same

analysis that the Learning Tree™ Middle School Intervention Program is a “great” program but the teachers needed more support and training by the Learning Tree™ Site Monitors.

Elementary Survey Results

Elementary teachers at Magnolia Elementary School participated in a survey that examined their level of training, preparation, and support for implementation of the Elementary School Reading Program. Twenty-four teachers completed this survey and also contributed written comments and suggestions for program improvement. Table 10 presents the results of the survey.

Table 10

Learning Tree™ Magnolia Program Results of the Teacher Evaluation Component

		Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure	Not Applicable	
1	The orientation training adequately prepared me to implement the program.	10	13	1	0	0	0	24
		42%	54%	4%	0%	0%	0%	100%
2	The other trainings were helpful.	10	11	3	0	0	0	24
		42%	46%	13%	0%	0%	0%	100%
3	I received all of the materials I needed to implement the program in a timely manner.	12	8	2	0	2	0	24
		50%	33%	8%	0%	8%	0%	100%
4	The lessons and materials matched the needs of my students.	9	6	8	1	0	0	24
		38%	25%	33%	4%	0%	0%	100%
5	The lessons were easy to follow.	13	11	0	0	0	0	24
		54%	46%	0%	0%	0%	0%	100%
6	I received the support I needed from the Learning Tree™ Monitor.	15	8	1	0	0	0	24
		63%	33%	4%	0%	0%	0%	100%

Ninety-six percent of the teachers (23 out of 24) reported that they felt adequately prepared by the training for the program (Strongly-agree” and “Agree”). One teacher reported that he or she did not feel adequately prepared. Other trainings for the program were helpful according to 88 percent of the teachers. Three of the 24 teachers (13%)

disagreed with this statement. Eighty-three percent of the teachers stated that they received all of the materials to implement the program, while two teachers (8%) disagreed. When asked if the lessons and materials matched the needs of their students, 63 percent agreed (“Strongly-agree” and “Agree”), however, 37 percent disagreed (“Disagree” and “Strongly Disagree”). All of the teachers agreed that the lessons were easy to follow. All but one teacher reported receiving adequate support from the “Learning Tree Monitor.

These survey results suggest that almost all (83 to 96%) of the Magnolia Elementary School teachers who participated in The Learning Tree™ program felt prepared and supported in their implementation of the supplementary reading program. A few teachers reported that their students had needs that were not met by the materials and that they needed the materials provided in a timelier manner. These findings will lead to program improvement and can be corrected.

All of the teachers who completed the survey responded to one or all of the following open-ended questions:

1. Which aspects of The Learning Tree™ program did you most like and why?
2. What would you like to see changed in the program?
3. Please include reasons for why you would like to see specific things changed, as well as any suggestions you may have.

Analyzed for whether the comments were positive or negative, survey data contained more positive responses than negative ones. Teachers were generally positive. For example: Most thought the program was “great,” the Learning Tree™ Monitor knowledgeable; they liked the 5:1 ratio of student to teacher, and the use of research-based strategies (e.g. process writing, direct instruction, reciprocal teaching and student-led conferences). Some teachers were very concerned about the placement of students, and stated that the reading portion of the program was too easy for some students.

Summary of Teacher Survey Results for Middle School and Elementary Learning Tree Implementation

The Teacher Evaluation Component of the Learning Tree™ Program strongly suggests that teachers were adequately prepared and provided with coaching and support to effectively implement the supplemental program. The survey and the written

comments are part of the preliminary evaluation of program results and constitute a portion of the formative evaluation of The Learning Tree™ services. Action Learning Systems values the comments and suggestions of teachers and will investigate their concerns and strive to continually improve program materials and quality.

CONCLUSIONS AND RECOMMENDATIONS

This preliminary evaluation of the Learning Tree™ academies supports the reports of the Learning Tree teachers that students in the ALS supplemental services programs are improving and demonstrating desirable gains in mastery of the California English Language Arts standards at both the elementary and middle school levels and in mathematics, especially in Algebra and Functions. While most of the differences between pretest and post-test scores did not attain statistical significance, one did and in all cases, the students averaged higher post-tests than pretests, signaling improvement of the students' proficiencies after attending a short nine-week program.

The ALS tests need refinement, particularly the reading comprehension and mathematics tests. The current evaluation design will need to be completed examining all the assessment data from all the Learning Tree™ academies, focusing most closely on the writing assessment, the *San Diego Quick Assessment*, and the middle school mathematics test data.

Finally, ALS plans to conduct a randomized control group study in the near future. That study will provide an even better estimate of the short-term effect of the nine-week Learning Tree™ academies.

Appendix A

Contact List for Districts Other than LAUSD

Summer School 2003

Rami Muth

707/399-5000

Office of Curriculum and Instruction, Fairfield-Suisun Unified School District
Fairfield, California

District-wide Intervention program (all elementary schools)

JoAnn Olmsted

209/933-7030

Director of Curriculum and Instruction and Professional Development
Stockton Unified School District
Stockton, California

Literacy Loop Cross-Age Implementation of the Learning Tree Program

Carla Sanger

CEO, LA's BEST After School Program

213/ 978-0801

LA Mayor's Office

Los Angeles, California

Also contact the principal of Bridge Elementary School, LAUSD for information on the program in use by cross-age tutors.

Jean Whitaker, Principal

818/367-1071

Olive Vista Middle School

Los Angeles Unified School District

Appendix B

Detailed Analyses of the Alignment between NCLB Requirements and Examples of Learning Tree™ Components

Appendix C

Educational Experience of Learning Tree™ Site Monitors

ALS Employee	Experience
Scott Houston Learning Tree™ Coordinator	National Board Certified in Mathematics. Expert in the area of Scientifically based Instructional Strategies and Instructional Strategies in the area of Mathematics. Secondary Math and Science Teacher, Professor at Ca State San Bernardino for Middle School Project in the area of Adolescent Growth and Statistics. Master's Degree in Education emphasis in Middle School Education.
Sheila Wells	Expert in the area of Coaching and Direct Instruction with an emphasis on support services for students classified as strategic and/or intensive as defined by State of California more then 2 years behind grade level. Elementary and Middle School Teacher, BTSA Support Provider/Trainer and Math Specialist. Master's Degree in Education emphasis in Curriculum and Development.
Kris Tom	Expert in the area of Reading, Writing and Skills based instruction in the Social Studies content area. High School Teacher, AVID Coordinator/Teacher, Master's in Education emphasis on Skill Based Instruction
Karen Jones	Expert in the area of Early Childhood and Adolescent Development with an emphasis in intervention programs. Elementary School Teacher and BTSA Mentor. Taught at the child development lab school at CSUN. Master's Degree in Education emphasis Early Childhood and Adolescent Development
Jezelle Fullwood	Expert in the area of Direct Instruction Programs including Open Court and Spotlight on Literacy. Elementary School Teacher, BTSA Mentor, Title I Coordinator and DELTA Coach. Master's Degree in Education emphasis in counseling.
Amy McCammon	Expert in the area of Elementary and Secondary Literacy. Elementary and Middle School Teacher, Literacy Coach, and Standards Trainer. Master's Degree in Education emphasis in Instructional Technology.
Dan Bernstein	Expert in the area of assessment and testing. Secondary Content Teacher and Master Teacher for Princeton Review, part of the National Facility Smithsonian Institute for Curricular Revitalization. Master's in Teaching emphasis in Social Sciences

Contractual Employees	
Consultant	Experience
Bob Bowdoin	Mt. Vernon Middle School: LAUSD Math/Science Sixth Grade Teacher
Mary Carhee	Retired LAUSD employee: Worked in elementary schools with struggling readers
Robert Hidalgo	A.B Miller High School: FUSD Former Middle School Language Arts Trainer, Current High School Social Studies Teacher
Cassie Holman	Retired LAUSD employee: Former math coach
Roberta Johnston	Olive Vista Middle School: LAUSD Current Sixth Grade Math/Science Teacher. Trained in the DI program
Jennifer Pointer	Sun Valley Middle School: LAUSD Current Sixth Grade Math/Science Teacher
Jesus Rocha	Adams Middle School: LAUSD Math Coach; Former Math Teacher
Alonia Rose	Elementary School Teacher: Has taught the elementary Learning Tree™ program
Kim Scott	Sun Valley Middle School: LAUSD Current Sixth Grade Math/Science Teacher
Mark Steidl	Former Olive Vista Middle School Employee: Currently works with handicapped students
Felipe Velez	Mt. Vernon Middle School: LAUSD Administrator: Taught language arts and is currently math administrator
Marian Chichioco	Colony High School: RCUSD: Currently a high school math teacher.
Eunice Doguiles	Private School Educator: Self-Contained

APPENDIX D

Scope and Sequences for Learning Tree™ Programs

Sample Instructional Sequence per Program

Appendix E
Sample Assessment Tests

APPENDIX F

Description of the *San Diego Quick Assessment*

From the National Institute for Literacy *Assessment Strategies and Reading Profiles*

http://www.nifl.gov/readingprofiles/SD_List_Pop.htm

The San Diego Quick Assessment

The San Diego Quick Assessment is a set of graded word lists that you can use to determine your learner's Word Recognition ability.

You can find this assessment at

<http://www.gomilpitas.com/homeschooling/articles/060899.htm>

It can also be found in these two print sources:

- Ekwall, E., & Shanker, J.L. (1988). *Diagnosis and remediation of the disabled reader (3rd edition)*. Boston, MA: Allyn and Bacon, Inc., pp. 102-103.
- La Pray, M., & Ramon, R. (1969). The graded word list: Quick gauge of reading ability. *Journal of Reading*, 12(4), 305-307.

Note: for purposes of this web site, if you use the list from either the Ekwall or La Pray source, please treat the "Primer" level of the *San Diego Quick Assessment* as GE 1. Then, treat the *San Diego Quick Assessment* Level 1 as GE 2, Level 2 as GE 3, Level 3 as GE 4, and so on.

APPENDIX G

Letter From Extended Learning Academy Administrator

Alan Scher-Byrd Middle School