Washington State Institute for Public Policy

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December 2011

How Does Washington State's Learning Assistance Program Impact Student Outcomes?

Preliminary Results

Revised January 2012 to include an executive summary

Washington's Learning Assistance Program (LAP) provides funding to school districts for supplemental services for K–12 students at-risk of not meeting state standards in reading and math. The state Quality Education Council (QEC), which makes recommendations to the legislature regarding basic education, requested that the Washington State Institute for Public Policy (Institute) collaborate with the Office of Superintendent of Public Instruction (OSPI) on a study that measures the impact of LAP on student achievement.[1]

This study is being conducted in two phases: (1) statistical analysis of the association between LAP funding and student outcomes; and (2) site visits at schools that provide LAP-funded services. This report describes preliminary results from the statistical analysis, focusing on elementary school student test scores. The final report, due September 1, 2012, will examine other grade levels and outcome measures.

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Executive Summary

Washington's Learning Assistance Program (LAP) provides funding for supplemental services for K–12 students at-risk of not meeting state learning standards. The state Quality Education Council contracted with the Washington State Institute for Public Policy to conduct a study that measures the impact of LAP on student achievement and investigates the effectiveness of different LAP-funded remediation strategies.

The study has two phases: (1) statistical analysis of the association between LAP funding and student outcomes; and (2) school site visits in order to characterize LAP-funded services. This report describes preliminary results from the statistical analysis, focusing on elementary student test scores in 2008-09.

The state student enrollment and assessment datasets do not reliably identify individual students who receive LAP-funded remediation. Therefore, the impact of LAP participation on individual student outcomes cannot be determined. Instead, we use expenditure data at the school-building level to analyze how LAP funding is associated with change in average student test scores.

The preliminary results do not detect a statistically significant impact of LAP on 4th and 5th grade student test scores in 2008-09. However, these results cannot be considered conclusive until additional grade levels, school years, and outcome measures have been analyzed using the same and alternative statistical models. The final results will be available in September, 2012.

[1] Quality Education Council (2011). *Report to the Legislature*. January 15, 2011. http://www.k12.wa.us/qec/pubdocs/QEC2011report.pdf. The Institute provides research support to the QEC under a legislative assignment (HB 1087 § 610 (4), in 2011).

Learning Assistance Program Background

The Learning Assistance Program is designed to help underachieving students meet state learning standards. Schools may use LAP funds to implement a variety of strategies to improve the academic performance of LAP-eligible students, including:

1) extended learning time,
2) supplemental literacy and math instruction,
3) special assistance in 11th and 12th grades,
4) professional development,
5) consultant teachers, and
6) parent outreach.[2]

Poverty rates are used to allocate LAP funds to school districts.[3] School districts have discretion to set specific eligibility criteria and select program activities.

In the 2010–11 school year, the state distributed over $110 million in LAP funds to 283 (out of 295) school districts; more than 100,000 students were provided LAP services. The funds are primarily used to pay for teachers and teacher aides.

Study Design

For this study, we are using quantitative statistical analysis and qualitative interviews to "measure the impact on student achievement of remediation strategies funded by the learning assistance program."[4] The Institute was directed to examine the overall impact of LAP as well as specific remediation strategies to determine whether some strategies are more effective than others.

Outcome Measures. Student outcomes are measured by the statewide assessment: Measures of Student Progress (MSP), High School Performance Exam (HSPE), and the Washington State Assessment of Student Learning (WASL). This preliminary report analyzes fourth- and fifth-grade WASL outcomes in the 2008-09 school year. The final analysis will include other grade levels, more recent test score results (the newly implemented MSP and HSPE), and other outcomes (special education, grade repetition, and high school graduation rates).

Statistical Analysis. To statistically measure the overall impact of LAP, we use data already routinely collected by OSPI. The state collects information about LAP primarily at the school district level, including funding levels, the number students served and their demographic characteristics, and types of staff funded by LAP (see Appendix A for details). LAP funding data are also available at the school building level.

Unfortunately, the state student enrollment and assessment datasets do not reliably identify individual students who receive LAP-funded remediation (see Appendix B for details). Therefore, we cannot isolate the impact of LAP participation on individual student outcomes. Instead, we use school-building level data to analyze how LAP funding is associated with average student test scores. Appendix C describes the variables and analytic methods used. We examine the federal Title 1 program[5] in addition to state LAP funding, because the two programs are similar regarding how funding is allocated and the types of students served.

Interviews with Schools. To learn about the specific remediation strategies used in schools, in the next phase of this study (in spring 2012) we will conduct interviews in a sample of schools. Schools will be selected for site visits based on the statistical analyses; we will identify a

[2] See RCW 28A.165.035 and WAC 392-162-072 for more detail about allowable uses of LAP funds. The Learning Assistance Program is a part of basic education.
[3] District K–12 FTE enrollment is multiplied by the percentage of students eligible for free or reduced priced meals and the per-student allocation ($282.13 in 2010–11). Funding enhancements are provided to districts with high concentrations of poverty or English language learners.
[4] HB 1087 § 610 (4), introduced in 2011, but did not pass. The QEC's research assignment is based on the language in this bill.
[5] Title 1 provides financial assistance to local educational agencies and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards. Funds can be used for targeted assistance or schoolwide improvement programs. Over $122 million in Title 1 funds was distributed to Washington public K-12 schools in 2008-09.

representative sample of schools based on their characteristics and student outcomes.

Preliminary Results

We developed statistical models to examine the association between LAP/Title 1 funding and 2008-09 elementary school test scores. The models control for differences among schools along the following variables:

- Students' average prior year test scores (for fourth graders, we use third grade test scores; for fifth graders, fourth grade test scores);[6]
- Per-pupil expenditures;
- Student demographics (percent in the school building who are eligible for free or reduced price meals, in special education, in the state transitional bilingual instructional program, by race/ethnicity, and by gender); and
- Teacher characteristics (average years of experience and percent with a master's degree in each school building).

We use a variety of ways to measure the presence and amount of LAP and Title 1 funding in schools:

- The presence of LAP and Title 1 funding, separately as well as together;
- The amount of LAP and Title 1 funding, separately as well as together; and
- The amount of compensatory funding.[7]

Appendix C describes how we estimate these measures. For each, we examine test scores of two groups of students:

1) Students who scored below a 400 on the WASL in the same subject area (but in the prior grade level) in 2007-08. This sub-sample was selected based on the goal of the LAP program to "assist underachieving students."[8]
2) All students for whom test score data are available.

We examine average test scores among these relatively broad populations because we do not know which students actually receive LAP services. The statistical models are designed to detect the impact on average test scores given the presence of LAP (and Title 1) funding in a school building. Because only some of the students actually receive LAP services, the impacts are diffused and more difficult to detect using school-level data.

The statistical models presented in Appendix C do not, overall, detect an impact of LAP on elementary student test scores. In nearly all of the models presented, zero impact is detected (the LAP and Title 1 funding coefficients are not statistically significant). Only three LAP or Title 1 coefficients are statistically significant, and not in a consistent direction.

In all of the models, the average prior year test score is the strongest predictor variable for current year test scores (higher prior year test scores are associated with higher current year test scores). The percentage of students eligible for free and reduced price meals is also consistently related to student test scores (higher percentages are associated with lower current year test scores). In some models, other student characteristics (such as percent in special education or percent Asian) and average years of teacher experience also have a statistically significant association with elementary student test scores.

These results should be considered speculative.

[6] In this preliminary set of results, we focus on elementary students in grades 4 and 5. Lower grade levels are not covered because the models use prior year test scores as a key explanatory variable, and the earliest grade level assessed by the state is grade 3. Higher grade levels, more recent years of data (using the Measures of Student Progress (MSP) and High School Performance Exam (HSPE)), and other outcomes (special education, grade repetition, and high school graduation rates) will be added in the final (September 2012) report.

[7] Compensatory expenditures make up approximately six percent of total expenditures and include LAP, Title 1, state transitional bilingual instructional program, special and pilot programs, and institutional funding. While this is not a specific measure of LAP and Title 1 expenditures, it is one way to estimate the additional resources provide to struggling students in Washington's K-12 schools.

[8] RCW 28A.165.005

More precise results that estimate the impact of actually receiving LAP services require more reliable individual level data to identify students who do and do not receive assistance through LAP. Absent that, we will continue to refine our data and models and will report final results in September 2012.

Appendix A. District-level Data on the Learning Assistance Program

This appendix summarizes information regarding the Washington state Learning Assistance Program (LAP). The information is based on data that school districts submit to the Office of Superintendent of Public Instruction (OSPI) Title 1, Part A and Learning Assistance Program Office each year. For this study, OSPI provided LAP datasets for school years 2007-08 through 2010-11.

Exhibit A1
LAP State Funding Allocations

Year	Total LAP allocation statewide*	Number of districts that receive LAP funding**	Average LAP $/district***	Number of schools that receive LAP funding	Average LAP $/school***
2007-08	$94,362,315	288	$327,647	*no data*	*no data*
2008-09	$91,860,370	287	$316,428	1,262	$71,961
2009-10	$101,588,531	287	$351,492	1,231	$81,948
2010-11	$110,929,649	283	$391,978	1,273	$87,140

*Including funds allocated to districts only; does not include funding for state administration of the program.
**According to the financial data (LAP student headcount data do not match up precisely with the financial dataset).
***This estimate excludes allocations in the dataset that are not associated with a specific school building or district.

Exhibit A2
LAP Students Served

Year	Total LAP students	Total students statewide*	LAP students as % of total students	Statewide % of students eligible for free/reduced price meals**	Statewide % of 4th graders who do not meet state standards in reading***	Statewide % of 4th grades who do not meet state standards in math***
2007-08	101,259†	1,031,846	9.8%	37.9%	27.4%	46.4%
2008-09	90,376	1,038,345	8.7%	43.5%	32.7%	40.7%
2009-10	109,159	1,036,135	10.5%	42.3%	32.8%	46.3%
2010-11	117,548	1,040,311	11.3%	43.5%	32.7%	40.7%

Note: LAP funding is allocated to districts based on poverty rates; the funding is to help underachieving students.
*Based on October headcounts from the OSPI report card website.
**Family income up to 180 percent of federal poverty level.
***Percentage meeting standard varies by grade level; 4th grade data included here for illustrative purposes.
†Includes students served in "schoolwide" programs (2007-08 was the last year schoolwide programs were recorded in the state LAP data). 2007-08 program district-level data have many missing values for students served; the estimate for this year may not be comparable to later years.

Appendix A. District-level Data on the Learning Assistance Program

Exhibit A3
District LAP Per-Pupil Funding

Year	Statewide average	Median	High	Low	Standard deviation
2007-08*	$1,589	$1,257	$92,971	$82	$6,578
2008-09	$1,005	$1,092	$13,822	$88	$1,211
2009-10	$924	$1,030	$13,642	$72	$1,077
2010-11	$943	$1,048	$ 4,641	$130	$740

*2007-08 program district-level data have many missing values for students served; these estimates may not be comparable to later years, and the values may be inflated.

These per-pupil estimates are based on the number of aggregate students districts report serving in LAP. The estimates do not include districts that do not provide LAP.

Exhibit A4
LAP Students by Subject Area, 2007-08 through 2010-11

Year	Reading	Language	Math	Readiness (grades K-2)	Other*
2007-08**	65,846	21,273	49,387	*no data*	*not applicable*
2008-09	58,850	10,897	48,633	1,262	*not applicable*
2009-10	67,281	14,437	61,101	1,450	21,444
2010-11	65,248	12,159	63,618	1,359	5,227

Totals do not match Exhibit A2 because some students receive assistance in more than one subject area.
*In 2009-10, this category includes additional support in grades 8, 11, and 12. In 2010-11, this category includes additional support in grades 11 and 12. These additional support services were not authorized prior to 2009-10.
**Includes students served in "schoolwide" programs.

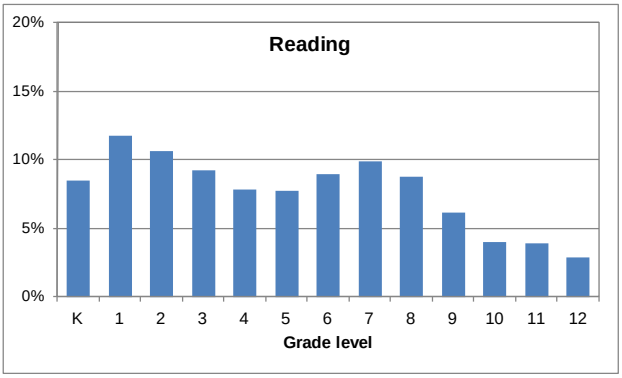
In 2010-11, 81 school districts used all or part of their LAP funding for summer school programs. (Summer school data were not available in earlier years).

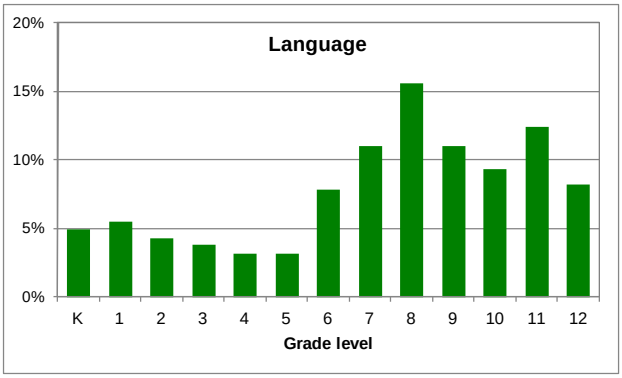
Exhibits A5 through A7 present LAP student characteristics: grade levels by subject area, race/ethnicity, gender, special education status, and participation in the state transitional bilingual program.

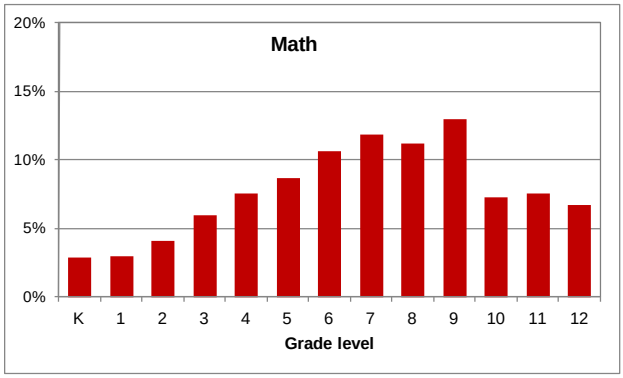
- Reading assistance funded by LAP is mostly provided in earlier grades.
- Language and math assistance funded by LAP is more concentrated in higher grade levels.
- Proportionately more Hispanic and American Indian students and students in the state transitional bilingual instructional program receive LAP-funded services than in the statewide population.

Appendix A. District-level Data on the Learning Assistance Program

Exhibit A5
Distribution of LAP Students by Grade Level, 2010-11



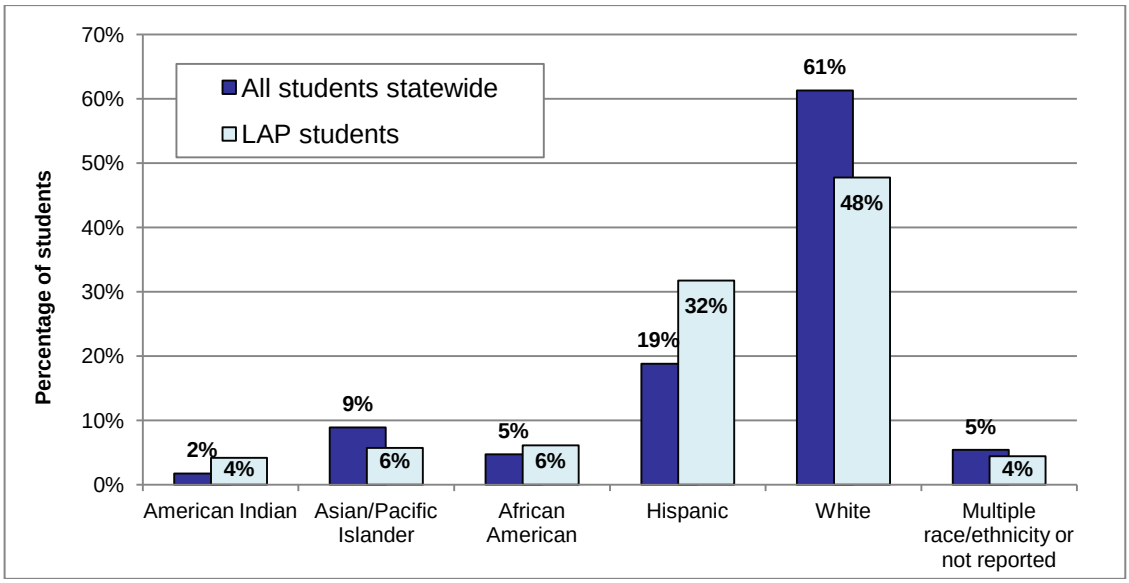




WSIPP, 2011

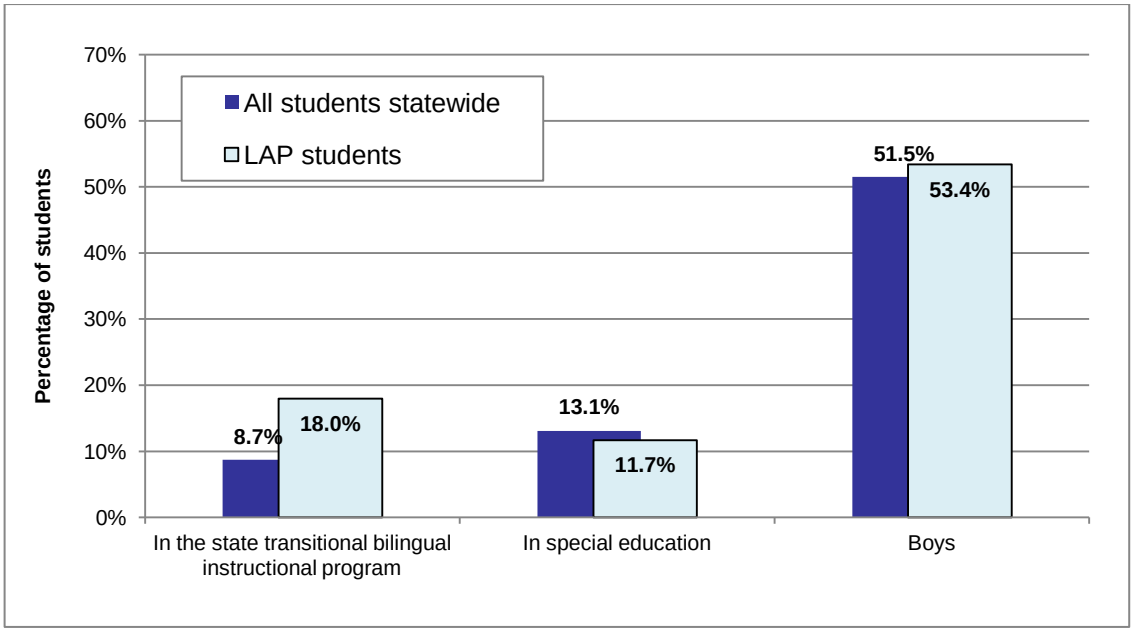
Appendix A. District-level Data on the Learning Assistance Program

Exhibit A6
Distribution of LAP Students by Race/Ethnicity Compared With All Students, 2010-11



WSIPP, 2011

Exhibit A7
Other LAP Student Demographics Compared With All Students, 2010-11



WSIPP, 2011

Appendix A. District-level Data on the Learning Assistance Program

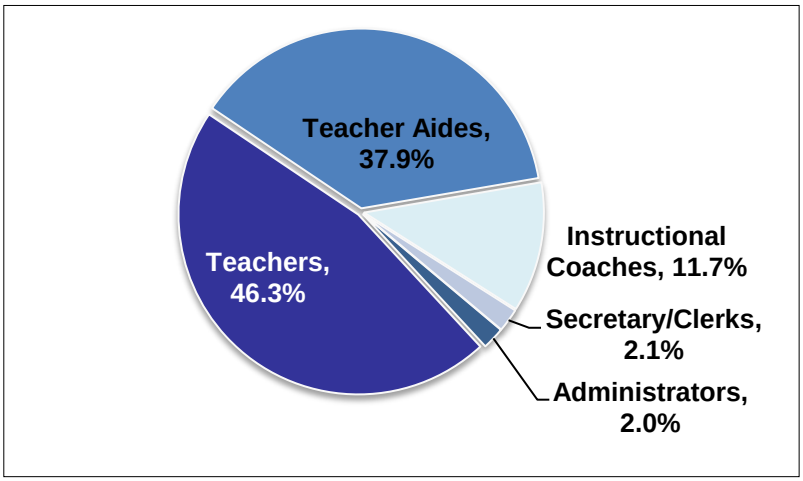
Most staff hired by LAP funds are teacher aides or teachers (Exhibits A8 through A10). In 2010-11, on average, school districts that received LAP funding used the money to pay for:

- 3.1 teacher and 2.6 teacher aide FTEs;
- 0.8 instructional coach FTE; and
- A small portion for administration & clerical support (0.1 FTE each).

Exhibit A8
Statewide Total: Staff Hired by LAP Funds

Year	Adminis-trators	Admin FTEs	Teachers	Teacher FTEs	Instructional Coaches	IC FTEs	Teacher aides	T. aide FTEs	Secretary/ Clerk	S/C FTEs
2007-08	183	38.6	1257	540.8	164	83.3	1850	665.3	138	35.3
2008-09	168	37.0	1322	525.8	216	115.0	1989	644.4	149	36.0
2009-10	164	38.8	1698	647.2	258	143.7	2089	663.1	140	37.4
2010-11	173	38.3	2064	883.7	224	223.5	2001	723.3	136	40.1

Exhibit A9
Distribution of Staff Hired by LAP Funds, 2010-11



WSIPP, 2011

Exhibit A10
Average Per District: Staff Hired by LAP Funds

Year	Adminis-trators	Admin FTEs	Teachers	Teacher FTEs	Instructional Coaches	IC FTEs	Teacher aides	Teacher aide FTEs	Secretary/ Clerk	S/C FTEs
2007-08	0.6	0.1	4.4	1.9	0.6	0.3	6.4	2.3	0.5	0.1
2008-09	0.6	0.1	4.6	1.8	0.8	0.4	6.9	2.2	0.5	0.1
2009-10	0.6	0.1	5.9	2.3	0.9	0.5	7.3	2.3	0.5	0.1
2010-11	0.6	0.1	7.3	3.1	0.8	0.8	7.1	2.6	0.5	0.1

Appendix B. Limitations in Individual-Level Enrollment Data

In the Washington State public K-12 student enrollment dataset,[1] individual student records contain a field indicating whether a student received LAP services (or not) for each month of the school year. We attempted to use this field to compare outcomes of students who receive LAP with similar students who do not receive LAP. However, we discovered that this field is unreliable.

Exhibit B1 shows that not all Washington school districts reliably identify students who receive LAP. We compared the count of LAP students based on individual student data (submitted monthly to the Office of Superintendent of Public Instruction, or OSPI) with district-reported aggregate totals of students served for three school years (reported annually to OSPI). Few of the counts matched (row a), and for most school districts, the counts were off by more than 20 percent (row c). Some districts do not flag any of their LAP students in the individual level data (row e).

Exhibit B1
How did the headcounts of LAP students compare between the district-level and student-level datasets?

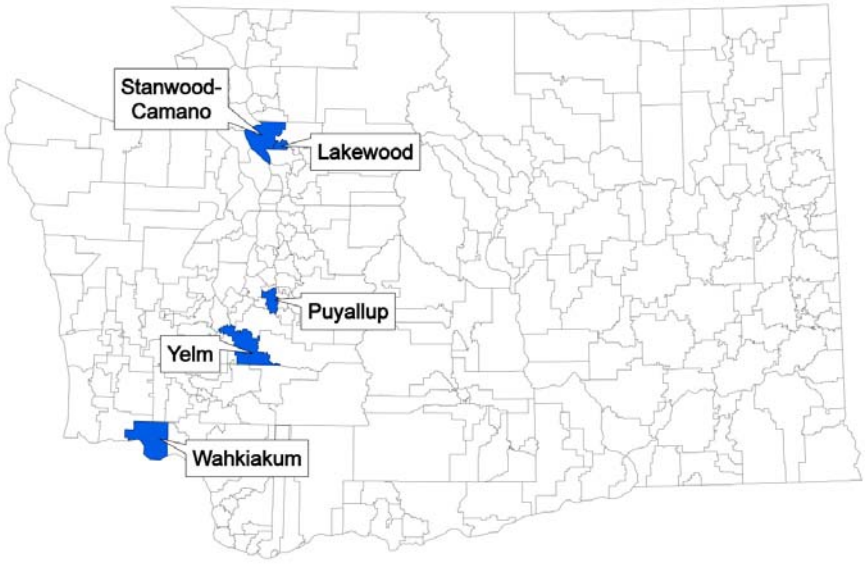
	2007-08	2008-09	2009-10
(a) The counts matched	2	3	3
(b) The counts were close (<20% off) but not a perfect match	45	49	66
(c) The counts were off (by >20%)	145	172	134
(d) No students flagged in individual data, but district data reported students served	32	61	81
(e) LAP $ allocated, but no students reported served in either data source	25	2	3
(f) District report does not include LAP student headcount, but individual data show some students were served	38	0	0
(g) No LAP $ allocated and no students reported served	9	8	8
Number of districts	296	295	295

[1] CSRS for 2008-09, and CEDARS for later years.

Appendix B. Limitations in Individual-Level Enrollment Data

Comparing the LAP student headcounts across those three school years, we identified only five districts that appear to have reliable LAP counts in the individual level data for each of those years. "Reliable" is defined here as having LAP individual level and district aggregate counts that are within 20 percent of each other. The five districts with counts within 20 percent of one another in all three years are identified in Exhibit B2.

Exhibit B2
Five Districts With Consistent LAP Student Counts
Based on WSIPP Analysis of Individual-Level and District-Aggregate Data



These five districts, all on the I-5 corridor in Western Washington, represent about 4 percent of statewide enrollment, and about 2 percent of all LAP students. On average, these five districts are larger, have lower poverty rates, and have fewer students in LAP than the statewide averages (see Exhibit B3).

Appendix B. Limitations in Individual-Level Enrollment Data

Exhibit B3
Selected Descriptive Statistics for Five Districts With Consistent LAP Student Counts Based on WSIPP Analysis of Individual-Level and District-Aggregate Data

	2007-08	2008-09	2009-10
Total Enrollment*			
5 districts: total student enrollment	31,789	45,328	45,348
Statewide: total student enrollment	990,496	996,432	1,012,357
5 districts: as a percentage of statewide enrollment	3.2%	4.5%	4.5%
LAP Enrollment**			
5 districts: total LAP students	1,726	1,904	1,683
Statewide: total LAP students	59,363	90,376	109,159
5 districts: LAP students as % of LAP students statewide	2.9%	2.1%	1.5%
5 districts: LAP students as % of total enrollment	5.4%	4.2%	3.7%
Statewide: LAP students as % of total enrollment	6.0%	9.1%	10.8%
School District Size*			
5 districts: average school district size	6,884	6,889	6,842
Statewide: average school district size	3,358	3,378	3,432
Poverty Rates*			
5 districts: % of students eligible for free/reduced price meals	23.9%	29.5%	31.0%
Statewide: % of students eligible for free/reduced price meals	37.9%	42.2%	43.2%
LAP Expenditures**			
5 districts: LAP dollars per-pupil	$1,066	$1,091	$1,401
Statewide: LAP dollars per-pupil	$1,589	$1,005	$924

*From the OSPI report card website.
**Based on information provided in annual district-aggregate reports.

Because these five districts are not representative of the state as a whole or of districts that provide LAP, we instead use school-level data to test how the presence and magnitude of LAP dollars are associated with student outcomes statewide. Appendix C provides details of the preliminary results from that approach.

Appendix C. School-Level Statistical Analysis: Preliminary Results

This appendix summarizes preliminary results from a school-level analysis of the impact of the Learning Assistance Program (LAP) on student outcomes. The analysis uses multivariate regression techniques to measure how LAP funding is associated with average student test scores. As of this publication date, we are continuing to refine the regression models to more precisely measure these relationships, and the results should be considered speculative. Final results will be presented in the Institute's September 1, 2012, report to the Quality Education Council.

For each statistical model presented in this appendix, the outcome variable is: schools' average Washington Assessment of Student Learning (WASL) test scores in 2008-09 for the grade level and subject area specified. In this preliminary set of results, we focus on elementary students in grades 4 and 5 and reading and math scores. Lower grade levels are not covered because the models use prior year test scores as a key explanatory variable, and the earliest grade level assessed by the state is grade 3. Higher grade levels, more recent years of data (using the Measures of Student Progress (MSP) and High School Performance Exam (HSPE)), and other outcomes (special education, grade repetition, and high school graduation rates) will be added in the final report in September 2012.

The statistical models examine the association between LAP and Title 1 funding and 2008-09 test scores at the school building level. We analyze both federal Title 1 and state LAP funding, because the two programs are similar in how funding is allocated and the types of students served. The models control for differences among schools along the following variables:

- Students' average prior year test scores (for fourth graders, we use third grade test scores; for fifth graders, fourth grade test scores);
- Per-pupil expenditures (district average total expenditures and "compensatory" expenditures, which are partly made up of LAP and Title 1 funds);[1]
- Student demographics (percent in the school building who are eligible for free or reduced price meals, in special education, in the state transitional bilingual instructional program, by race/ethnicity, and by gender); and
- Teacher characteristics (average years of experience and percent with a master's degree in each school building).

We use individual-level student assessment data to calculate schools' average test score. Students included in each school's average are those who have an available test score in both years (2007-08 and 2008-09) in that subject area. Schools with fewer than 5 students with a test score in both years are excluded from the analysis. The models are weighted by the number of students included in each school's average test score calculation.

[1] Compensatory expenditures make up approximately six percent of total expenditures and include LAP, Title 1, state transitional bilingual instructional program, special and pilot programs, and institutional funding. While this is not a specific measure of LAP and Title 1 expenditures, it is one way to estimate the additional resources provide to struggling students in Washington's K-12 schools. In the models that examine the amount of LAP and Title 1 funding, we subtract compensatory expenditures from total expenditures per-pupil.

Appendix C. School-Level Statistical Analysis: Preliminary Results

For each LAP funding measure (described below), we examine test scores of two groups of students:

1. Students who scored below a 400 on the WASL in the same subject area (but in the prior grade level) in 2007-08. This sub-sample was selected based on the goal of the LAP program to "assist underachieving students."[2]
2. All students for whom test score data are available. Because we do not know which students actually receive LAP services, we include all students in these models to examine whether LAP funding is associated with improvements in student test scores overall.

Exhibits C1 and C2 summarize the means and standard deviations for the variables used in the analyses.

Exhibits C3 through C12 present the preliminary results from the statistical models. Because we do not have precise measures of LAP per-pupil funding by school building (funding is reported at the building level, but the number of students served is reported at the district level), we estimate "LAP funding" in a variety of ways:

- **Exhibit C3 & C4** present preliminary results from statistical models that test **whether the presence of LAP funding (separate from Title 1) is associated with student test scores**. Each school building is coded as a '1' if LAP funding is allocated to that building, and a '0' if no LAP funding is allocated; this process is repeated for Title 1 funding allocations. The LAP coefficients represent the impact of having LAP funding in the school building, regardless of the amount of funding. Total per-pupil expenditures (district-wide averages) are used as a control variable.
- **Exhibits C5 & C6** present preliminary results from statistical models that test **whether the presence of LAP or Title 1 funding is associated with student test scores.** Each school building is coded as a '1' if LAP or Title 1 funding is allocated to that building, and a '0' if no LAP or Title 1 funding is allocated. The LAP/Title 1 coefficients represent the impact of having LAP or Title 1 funding in the school building, regardless of the amount of funding. Total per-pupil expenditures (district-wide averages) are used as a control variable.
- **Exhibits C7 & C8** present preliminary results from statistical models that test **how the amount of per-pupil LAP funding is associated with student test scores.** To determine per-pupil funding, we use the school building funding allocations as the numerator, and for the denominator, we count the number of students in that building who did not meet standard on the WASL in the prior year in math or reading (because we do not know the number of students actually receiving LAP services in each school building).[3] Title 1 funding amounts are included as separate per-pupil funding amounts. Total per-pupil expenditures minus "compensatory" are used as a control variable.

[2] RCW 28A.165.005

[3] Because this building-level per-pupil expenditure calculation is an estimate, we checked our results using district-level data. School districts report annually on the aggregate number of students served in LAP; we summed the school building allocations to the district level and divided by the number of students served. Using these district-level per-pupil expenditures (in lieu of building-specific estimates) yielded similar results.

Appendix C. School-Level Statistical Analysis: Preliminary Results

- **Exhibits C9 & C10** present preliminary results from statistical models that test **how the amount of per-pupil LAP plus Title 1 funding is associated with student test scores.** To determine per-pupil funding, we use the school building funding allocations as the numerator (combining LAP and Title 1 allocations), and for the denominator, we count the number of students in that building who did not meet standard on the WASL in the prior year in math or reading. Total per-pupil expenditures minus "compensatory" are used as a control variable.

- **Exhibits C11 & C12** present preliminary results from statistical models that test **how the amount of "compensatory" funding is associated with student test scores.** The compensatory funding amounts are reported by the state at the district level. Total per-pupil expenditures minus "compensatory" are used as a control variable.

For each of the expenditure measures (LAP, Title 1, and total per-pupil expenditures), we excluded cases where the average was more than three standard deviations above the mean.

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C1
Descriptive Statistics for Non-Test Score Variables, Elementary Schools Included in the Analysis

2008-09	Mean	Standard Deviation
LAP per-pupil funding* *all schools in dataset*	$470	$634
LAP per-pupil funding* *schools that receive LAP funds*	$736	$659
Title 1 per-pupil funding* *all schools in dataset*	$1,013	$1,434
Title 1 per-pupil funding* *schools that receive Title 1 funds*	$1,946	$1,460
LAP + Title 1 per-pupil funding* *all schools in dataset*	$1,483	$1,520
LAP + Title 1 per-pupil funding* *schools that receive either funds*	$1,729	$1,507
Total per-pupil expenditures (district avg.)	$9,812	$1,046
Per-pupil expenditures (minus compensatory)	$8,851	$853
Compensatory per-pupil expenditures	$1,016	$519
% free/reduced price meals	44.0%	23.8%
% special education	13.2%	6.3%
% transitional bilingual instructional program	10.3%	13.0%
% American Indian	2.7%	7.3%
% Asian	7.9%	8.9%
% African American	5.6%	8.4%
% white	62.7%	23.2%
% males	51.5%	2.9%
Avg. years teacher experience	12.0	3.0
% teachers with masters degree	62.2%	14.8%

Means and SDs are weighted by total enrollment in each school included in the analysis (N=1507). Schools are included if they have at least five students in grades 4 or 5 with available test score data in both years (2008-09 for current year and 2007-08 for prior year) and the district's per-pupil expenditures are within three standard deviations from the mean. LAP and Title 1 funding data were provided by OSPI's Title 1, Part A and Learning Assistance Program Office. Total per-pupil expenditures were downloaded from <http://www.k12.wa.us/safs/PUB/FIN/0809/fs.asp>. School-building level student and teacher characteristics data were downloaded from <http://www.k12.wa.us/DataAdmin/GenderEthnicity.aspx>.

*The number of actual LAP students served in each school building is not reported to the state; therefore, these, estimates are calculated as follows: the 2008-09 LAP and Title 1 allocation to each school building divided by the number of students in that building who scored less than a 400 on the math or reading WASL in 2007-08. Because these figures are estimated at the school building level and only include schools that have grades 4 and 5, the means and standard deviations do not match those reported in Appendix A.

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C2
Descriptive Statistics for Test Score Variables

	Mean WASL Score	Standard Deviation	N (schools)
Math, grade 4, students <400 prior year			
Current year *2008-09*	363.0	11.7	1026
Prior *(2007-08, 3rd grade)*	369.4	6.6	1026
Math, grade 4, all students			
Current year *2008-09*	401.5	17.8	1113
Prior *(2007-08, 3rd grade)*	411.6	13.1	1113
Math, grade 5, students <400 prior year			
Current year *2008-09*	380.1	10.8	1069
Prior *(2007-08, 4rd grade)*	367.5	7.0	1069
Math, grade 5, all students			
Current year *2008-09*	410.9	17.1	1107
Prior *(2007-08, 4rd grade)*	402.8	16.9	1107
Reading, grade 4, students <400 prior year			
Current year *2008-09*	390.8	5.3	1009
Prior *(2007-08, 3rd grade)*	374.4	5.4	1009
Reading, grade 4, all students			
Current year *2008-09*	411.9	8.1	1113
Prior *(2007-08, 3rd grade)*	411.8	10.9	1113
Reading, grade 5, students <400 prior year			
Current year *2008-09*	387.4	6.6	1012
Prior *(2007-08, 4rd grade)*	382.8	3.8	1012
Reading, grade 5, all students			
Current year *2008-09*	412.9	9.8	1107
Prior *(2007-08, 4rd grade)*	410.9	8.5	1107

School means and SDs were calculated using individual level WASL data; overall means are weighted by the number of students included in each school's average test score calculation. Schools are included in the calculations if they have at least five students in grade 4 or 5 with available test score data in both years (2008-09 for current year and 2007-08 for prior year) and the district's per-pupil expenditures are within three standard deviations from the mean.

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C3
Presence of LAP funding and impact on students who did not meet standard on the WASL the prior year

Population of students: Scored <400 in prior year on that subject area test
LAP variable = Whether the school received LAP funding in 2008-09

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8618*	0.8858*	0.5371*	0.979*
	(0.0492)	(0.0439)	(0.0255)	(0.0437)
School receives LAP funding	0.6415	0.0886	0.1108	0.015
	(0.6051)	(0.5128)	(0.2822)	(0.336)
School receives Title 1 funding	1.0808	0.4669	-0.015	0.7664
	(0.8445)	(0.6774)	(0.3915)	(0.4471)
Total per-pupil expenditures (district avg.)	0.0002	0.0009*	0.0000	0.0001
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
% free/reduced price meals	-7.5909*	-11.1516*	-2.5326*	-8.1528*
	(2.5427)	(2.1445)	(1.1734)	(1.3793)
% special education	-2.1332	11.1765*	-2.4389	-4.8438
	(6.7557)	(5.6128)	(3.2186)	(3.6411)
% transitional bilingual instructional program	-2.7002	5.6338	-1.4579	4.2233
	(4.2724)	(3.6798)	(1.9559)	(2.2896)
% American Indian	-5.0434	-2.7339	-2.4093	-1.3883
	(4.3182)	(3.5557)	(2.028)	(2.2102)
% Asian	12.0111*	7.1836	2.2617	-2.0005
	(4.3704)	(3.6748)	(1.9755)	(2.3296)
% African American	-10.3693*	0.0295	-4.5181*	-0.3282
	(4.4945)	(3.7664)	(2.0454)	(2.3435)
% white	3.1707	2.4102	-0.0841	2.4577
	(3.0657)	(2.5236)	(1.4149)	(1.6118)
% males	12.5363	-11.0834	10.7801	-1.0071
	(11.9194)	(9.6167)	(5.5505)	(6.3099)
Avg. years teacher experience	0.2169*	0.0535	0.1744*	0.0273
	(0.1088)	(0.0904)	(0.0507)	(0.0598)
% teachers with masters degree	0.6228	-0.1278	-0.0893	-0.0587
	(2.175)	(1.8351)	(1.0145)	(1.198)
Constant	34.755	52.2584*	184.0018*	14.6885
	(20.1424)	(17.4496)	(10.3545)	(17.3642)
Observations (schools)	1,030	1,077	1,015	1,019
Number of students	21,861	32.931	20,135	19,583
R^2	.4218	.5011	.4048	.4731

Unadjusted standard errors are in parentheses.
*Significant at $p < .05$

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C4
Presence of LAP funding and impact on all students

Population of students: All students with test score data available
LAP variable = Whether the school received LAP funding in 2008-09

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.919*	0.715*	0.5032*	0.8182*
	(0.0334)	(0.0198)	(0.0158)	(0.0227)
School receives LAP funding	0.1523	-0.2589	-0.0949	-0.1136
	(0.5798)	(0.4721)	(0.2278)	(0.2622)
School receives Title 1 funding	1.4378	0.6287	0.3449	0.5699
	(0.7672)	(0.602)	(0.3011)	(0.3342)
Total per-pupil expenditures (district avg.)	0.0002	0.0011*	0.0002	0.0003*
	(0.0003)	(0.0002)	(0.0001)	(0.0001)
% free/reduced price meals	-12.2419*	-17.3863*	-8.6149*	-9.8426*
	(2.5687)	(2.0847)	(1.0354)	(1.1918)
% special education	1.3513	4.1144	-1.4714	-2.5877
	(6.6228)	(5.3082)	(2.6044)	(2.9531)
% transitional bilingual instructional program	-8.189	1.1967	-1.1379	4.0052
	(4.7316)	(3.7897)	(1.8588)	(2.1177)
% American Indian	-6.518	-6.0694	-2.9509	-4.0096
	(5.1946)	(4.0246)	(2.0325)	(2.2465)
% Asian	15.1144*	14.7478*	3.6098*	4.2582*
	(4.4574)	(3.5689)	(1.7312)	(1.9719)
% African American	-16.5193*	-6.9176	-6.7664*	-0.8029
	(4.9815)	(3.923)	(1.946)	(2.1709)
% white	-1.7888	0.7542	-1.6034	2.9156*
	(3.225)	(2.5587)	(1.2712)	(1.4291)
% males	14.5024	-3.2539	7.4039	-0.6612
	(11.2614)	(8.9823)	(4.4378)	(4.9908)
Avg. years teacher experience	0.2315*	0.0447	0.1511*	0.0445
	(0.1035)	(0.0836)	(0.0407)	(0.0465)
% teachers with masters degree	3.8591	-0.7117	0.5177	-1.2045
	(2.1183)	(1.7062)	(0.8322)	(0.9476)
Constant	14.6579	119.6102*	201.8354*	76.653*
	(15.8212)	(9.9859)	(7.3919)	(10.1787)
Observations (schools)	1,123	1,118	1,123	1,118
Number of students	71,543	71,695	71,200	71,500
R^2	.7452	.8230	.8095	.8309

Unadjusted standard errors are in parentheses.
*Significant at $p < .05$

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C5

Presence of LAP or Title 1 funding (combined) and impact on students who did not meet standard on the WASL the prior year

Population of students: Scored <400 in prior year on that subject area test
LAP variable = Whether the school received LAP funding or Title 1 funding in 2008-09

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8615*	0.8864*	0.5373*	0.979*
	(0.0493)	(0.0439)	(0.0255)	(0.0437)
School receives LAP or Title 1 funding	0.6734	0.0072	-0.0566	0.1572
	(1.2225)	(0.9797)	(0.5692)	(0.6767)
Total per-pupil expenditures (district avg.)	0.0002	0.0009*	0.0000	0.0001
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
% free/reduced price meals	-6.465*	-10.4269*	-2.5685*	-7.0251*
	(2.2697)	(1.9341)	(1.0487)	(1.2442)
% special education	-1.5934	11.2854*	-2.3864	-4.7569
	(6.7483)	(5.6123)	(3.2144)	(3.6443)
% transitional bilingual instructional program	-2.3543	5.6965	-1.3816	4.1756
	(4.2604)	(3.6695)	(1.9466)	(2.2835)
% American Indian	-5.1013	-2.7719	-2.4468	-1.4492
	(4.3385)	(3.5681)	(2.0323)	(2.2245)
% Asian	12.502*	7.4048*	2.2603	-1.6344
	(4.3567)	(3.6637)	(1.9671)	(2.3244)
% African American	-10.8793*	-0.0853	-4.5597*	-0.5148
	(4.4816)	(3.7582)	(2.0394)	(2.3385)
% white	3.3785	2.5866	-0.0905	2.6757
	(3.0587)	(2.5202)	(1.4134)	(1.6135)
% males	12.4865	-11.0814	10.7715	-1.006
	(11.9266)	(9.6158)	(5.5497)	(6.3179)
Avg. years teacher experience	0.2172*	0.0545	0.1749*	0.0271
	(0.1089)	(0.0904)	(0.0507)	(0.0599)
% teachers with masters degree	0.8219	-0.0782	-0.0601	-0.0048
	(2.1694)	(1.8272)	(1.0114)	(1.194)
Constant	34.3377	51.9372*	183.9242*	14.5508
	(20.1527)	(17.4422)	(10.3491)	(17.382)
Observations (schools)	1,030	1,077	1,015	1,019
Number of students	21,861	32.931	20,135	19,583
R^2	.4212	.5013	.4052	.4720

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C6

Presence of LAP or Title 1 funding (combined) and impact on all students

Population of students: All students with test score data available
LAP variable = Whether the school received LAP funding or Title 1 funding in 2008-09

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.9148*	0.7141*	0.5026*	0.8189*
	(0.0334)	(0.0198)	(0.0158)	(0.0227)
School receives LAP or Title 1 funding	-0.1828	-0.9687	-0.6159	-0.0175
	(0.9601)	(0.7714)	(0.3764)	(0.4292)
Total per-pupil expenditures (district avg.)	0.0002	0.001*	0.0002	0.0002
	(0.0003)	(0.0002)	(0.0001)	(0.0001)
% free/reduced price meals	-9.8426*	-15.7243*	-7.645*	-8.8465*
	(2.3342)	(1.9035)	(0.936)	(1.0874)
% special education	1.8599	4.4596	-1.1915	-2.4561
	(6.6296)	(5.3063)	(2.6019)	(2.9564)
% transitional bilingual instructional program	-8.2138	1.1364	-1.141	3.9927
	(4.7246)	(3.7802)	(1.8531)	(2.1164)
% American Indian	-6.7893	-6.2812	-3.1109	-3.9735
	(5.2036)	(4.0273)	(2.0321)	(2.2519)
% Asian	16.1444*	15.4213*	4.0047*	4.594*
	(4.4444)	(3.5561)	(1.7244)	(1.9689)
% African American	-17.0669*	-6.9303	-6.756*	-0.9243
	(4.9762)	(3.9139)	(1.941)	(2.169)
% white	-1.124	1.3347	-1.2448	3.1682*
	(3.2282)	(2.5584)	(1.2696)	(1.4304)
% males	14.2845	-3.4415	7.2577	-0.6181
	(11.2747)	(8.9797)	(4.4342)	(4.9974)
Avg. years teacher experience	0.2286*	0.042	0.1478*	0.0453
	(0.1037)	(0.0836)	(0.0407)	(0.0466)
% teachers with masters degree	3.9629	-0.6804	0.5332	-1.1908
	(2.1169)	(1.7007)	(0.83)	(0.946)
Constant	16.4492	120.3988*	202.4245*	76.2234*
	(15.8197)	(9.9996)	(7.3869)	(10.2085)
Observations (schools)	1,123	1,118	1,123	1,118
Number of students	71,543	71,695	71,200	71,500
R^2	.7447	.8231	.8099	.8305

Unadjusted standard errors are in parentheses.
*Significant at $p < .05$

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C7
LAP per-pupil funding and impact on students who did not meet standard on the WASL the prior year

Population of students: Scored <400 in prior year on that subject area test
LAP variable = Amount of per-pupil LAP funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8576*	0.8908*	0.5361*	0.979*
	(0.0495)	(0.0442)	(0.0255)	(0.0441)
LAP per-pupil funding	0.0004	-0.0005	0.0000	-0.0003
	(0.0004)	(0.0004)	(0.0002)	(0.0003)
Title 1 per-pupil funding	0.0003	0.0000	0.0000	0.0000
	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Per-pupil expenditures (minus compensatory)	0.0003	0.0009*	0.0002	0.0003
	(0.0004)	(0.0003)	(0.0002)	(0.0002)
% free/reduced price meals	-7.5404*	-10.2851*	-2.722*	-7.3252*
	(2.502)	(2.1737)	(1.1613)	(1.4106)
% special education	-2.1943	11.5737*	-2.3259	-4.3745
	(6.7901)	(5.6433)	(3.2379)	(3.6778)
% transitional bilingual instructional program	-2.5763	5.0305	-1.4508	4.2166
	(4.2638)	(3.6642)	(1.954)	(2.2839)
% American Indian	-5.7950	-3.6230	-2.8133	-2.1947
	(4.3997)	(3.6223)	(2.0704)	(2.2635)
% Asian	11.6145*	6.1457	2.0185	-2.4920
	(4.5049)	(3.8008)	(2.0491)	(2.434)
% African American	-11.6117*	-1.2531	-4.9632*	-1.3765
	(4.6199)	(3.8501)	(2.1082)	(2.4067)
% white	2.4155	0.9588	-0.3050	2.1809
	(3.1728)	(2.6117)	(1.4734)	(1.6791)
% males	12.3116	-11.2235	10.8122	-1.3478
	(11.9449)	(9.5977)	(5.5636)	(6.3251)
Avg. years teacher experience	0.2113	0.0710	0.1712*	0.0206
	(0.109)	(0.0904)	(0.0508)	(0.0601)
% teachers with masters degree	0.8604	-0.0620	0.0557	0.3397
	(2.1751)	(1.8315)	(1.0167)	(1.1987)
Constant	36.9315	51.7559*	183.4329*	13.4705
	(20.2878)	(17.5998)	(10.4239)	(17.5581)
Observations (schools)	1,026	1,069	1,009	1,014
Number of students	21,812	32,828	20,069	19,514
R^2	.4208	.5038	.4056	.4727

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C8
LAP per-pupil funding and impact on all students

Population of students: All students with test score data available
LAP variable = Amount of per-pupil LAP funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.9002*	0.7144*	0.4969*	0.8098*
	(0.0339)	(0.0205)	(0.0161)	(0.0233)
LAP per-pupil funding	0.0002	-0.0005	0.0000	-0.0002
	(0.0004)	(0.0004)	(0.0002)	(0.0002)
Title 1 per-pupil funding	0.0007*	0.0002	0.0002	0.0002
	(0.0002)	(0.0002)	(0.0001)	(0.0001)
Per-pupil expenditures (minus compensatory)	0.0002	0.0012*	0.0002	0.0003
	(0.0004)	(0.0003)	(0.0001)	(0.0002)
% free/reduced price meals	-14.2516*	-16.7512*	-8.8733*	-9.9984*
	(2.6122)	(2.2079)	(1.0509)	(1.258)
% special education	0.4297	3.6443	-1.8393	-3.0830
	(6.6716)	(5.3712)	(2.6281)	(2.9802)
% transitional bilingual instructional program	-8.8207	0.5596	-1.4476	3.6933
	(4.7451)	(3.8075)	(1.8669)	(2.1234)
% American Indian	-7.8882	-6.9390	-3.2673	-4.5156*
	(5.2737)	(4.1029)	(2.0667)	(2.2863)
% Asian	13.4595*	13.1102*	3.0620	3.3461
	(4.5388)	(3.6841)	(1.7714)	(2.0349)
% African American	-18.7191*	-8.3603*	-7.2817*	-1.6743
	(5.0672)	(4.0049)	(1.9837)	(2.2117)
% white	-3.7698	-0.8172	-2.1642	2.1751
	(3.3374)	(2.6555)	(1.3181)	(1.4829)
% males	12.7813	-4.7301	6.7902	-1.3402
	(11.3057)	(9.0262)	(4.4667)	(5.0039)
Avg. years teacher experience	0.235*	0.0566	0.1534*	0.0450
	(0.1037)	(0.0839)	(0.0409)	(0.0465)
% teachers with masters degree	3.9048	-0.5939	0.4836	-1.1004
	(2.1252)	(1.7135)	(0.8365)	(0.9493)
Constant	25.6945	121.9796*	205.6263*	81.4697*
	(16.1962)	(10.4767)	(7.5928)	(10.5522)
Observations (schools)	1,113	1,107	1,113	1,107
Number of students	71,057	71,265	70,715	71,070
R^2	.7445	.8212	.8077	.8303

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C9

LAP and Title 1 per-pupil funding (combined) and impact on students who did not meet standard on the WASL the prior year

Population of students: Scored <400 in prior year on that subject area test
LAP variable = Amount of per-pupil LAP plus Title 1 funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8618*	0.8861*	0.5365*	0.9779*
	(0.0492)	(0.0441)	(0.0254)	(0.0439)
LAP + Title 1 per-pupil funding	0.0003	-0.0001	0.0000	0.0000
	(0.0002)	(0.0002)	(0.0001)	(0.0001)
Per-pupil expenditures (minus compensatory)	0.0003	0.0011*	0.0002	0.0003
	(0.0004)	(0.0003)	(0.0002)	(0.0002)
% free/reduced price meals	-7.4412*	-9.8627*	-2.6967*	-6.9544*
	(2.4215)	(2.127)	(1.1239)	(1.3716)
% special education	-2.2246	11.0873	-2.5684	-4.862
	(6.7661)	(5.6477)	(3.2235)	(3.667)
% transitional bilingual instructional program	-2.5148	5.0698	-1.4536	4.1324
	(4.2544)	(3.672)	(1.9487)	(2.2814)
% American Indian	-5.8	-3.8677	-2.8497	-2.0879
	(4.3893)	(3.6286)	(2.0666)	(2.2622)
% Asian	11.5483*	6.2924	1.9216	-2.0261
	(4.451)	(3.7748)	(2.0211)	(2.4066)
% African American	-11.6657*	-1.196	-5.008*	-1.0724
	(4.5892)	(3.8451)	(2.0942)	(2.3962)
% white	2.4446	1.4138	-0.3127	2.4882
	(3.1298)	(2.5903)	(1.4552)	(1.6592)
% males	12.5565	-11.0882	11.0423*	-0.9421
	(11.9206)	(9.6193)	(5.5515)	(6.319)
Avg. years teacher experience	0.2128	0.0552	0.1718*	0.0212
	(0.1087)	(0.0905)	(0.0506)	(0.0599)
% teachers with masters degree	0.8172	0.0155	0.0205	0.1307
	(2.1679)	(1.8305)	(1.0126)	(1.1952)
Constant	35.1088	51.6574*	183.1593*	13.5506
	(20.1802)	(17.5689)	(10.3979)	(17.4996)
Observations (schools)	1,030	1,076	1,014	1,018
Number of students	21,861	32,925	20,130	19,578
R^2	.4220	.5013	.4131	.4725

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C10

LAP and Title 1 per-pupil funding (combined) and impact on all students

Population of students: All students with test score data available
LAP variable = Amount of per-pupil LAP plus Title 1 funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8991*	0.7135*	0.4986*	0.8095*
	(0.0337)	(0.0204)	(0.016)	(0.0232)
LAP + Title 1 per-pupil funding	0.0006*	0.0001	0.0001	0.0002
	(0.0002)	(0.0002)	(0.0001)	(0.0001)
Per-pupil expenditures (minus compensatory)	0.0003	0.0013*	0.0003	0.0003*
	(0.0004)	(0.0003)	(0.0001)	(0.0002)
% free/reduced price meals	-13.4362*	-16.3817*	-8.7493*	-9.9087*
	(2.5484)	(2.163)	(1.0252)	(1.2303)
% special education	0.1632	3.4254	-1.869	-3.2019
	(6.628)	(5.3502)	(2.6117)	(2.9716)
% transitional bilingual instructional program	-9.3281*	0.3805	-1.5623	3.5124
	(4.7256)	(3.801)	(1.8608)	(2.1219)
% American Indian	-8.1787	-7.2931	-3.4261	-4.7181*
	(5.261)	(4.0997)	(2.0627)	(2.2863)
% Asian	14.0558*	13.4997*	3.1515	3.5583
	(4.486)	(3.6491)	(1.7528)	(2.0186)
% African American	-18.709*	-8.413*	-7.373*	-1.7012
	(5.0505)	(3.9965)	(1.9773)	(2.2078)
% white	-3.4808	-0.551	-2.163	2.2335
	(3.3043)	(2.6329)	(1.3056)	(1.4715)
% males	13.6688	-3.806	7.2399	-0.9321
	(11.2589)	(9.0097)	(4.4478)	(4.9971)
Avg. years teacher experience	0.2289*	0.045	0.1505*	0.0436
	(0.1033)	(0.0837)	(0.0407)	(0.0465)
% teachers with masters degree	3.8682	-0.6775	0.4705	-1.1937
	(2.1117)	(1.7065)	(0.8314)	(0.9462)
Constant	24.8144	120.4905*	204.1654*	80.7118*
	(16.066)	(10.4147)	(7.5306)	(10.4987)
Observations (schools)	1,121	1,115	1,121	1,115
Number of students	71,515	71,663	71,172	71,468
R^2	.7467	.8229	.8099	.8314

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C11
Compensatory per-pupil funding and impact on students who did not meet standard on the WASL the prior year

Population of students: Scored <400 in prior year on that subject area test
LAP variable = Amount of per-pupil LAP plus Title 1 funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.8628*	0.8843*	0.5439*	0.9799*
	(0.0493)	(0.044)	(0.0256)	(0.0437)
Compensatory per-pupil expenditures	0.0000	0.0005	-0.0009	-0.0014*
	(0.0011)	(0.0009)	(0.0005)	(0.0006)
Per-pupil expenditures (minus compensatory)	0.0003	0.001*	0.0003	0.0005*
	(0.0005)	(0.0004)	(0.0002)	(0.0002)
% free/reduced price meals	-6.0285*	-10.3587*	-2.2775*	-6.5501*
	(2.1875)	(1.8821)	(1.0187)	(1.2064)
% special education	-1.4919	11.0483	-2.7802	-5.2271
	(6.7623)	(5.6276)	(3.2143)	(3.6417)
% transitional bilingual instructional program	-2.4471	5.3864	-1.9288	3.1262
	(4.3028)	(3.7335)	(1.9635)	(2.3165)
% American Indian	-5.6423	-3.4469	-3.6693	-3.5556
	(4.5169)	(3.7522)	(2.1095)	(2.3431)
% Asian	12.3464*	6.6671	0.7926	-3.8465
	(4.6189)	(3.892)	(2.0893)	(2.4741)
% African American	-11.2188*	-0.803	-5.9629*	-2.6171
	(4.7137)	(3.9599)	(2.1469)	(2.469)
% white	3.2641	1.9246	-1.4925	0.4911
	(3.3804)	(2.8511)	(1.5663)	(1.8302)
% males	12.3427	-11.0792	11.1647*	-0.8304
	(11.9352)	(9.6267)	(5.5434)	(6.3049)
Avg. years teacher experience	0.2133	0.0533	0.176*	0.0253
	(0.1089)	(0.0905)	(0.0506)	(0.0597)
% teachers with masters degree	0.8718	0.0043	-0.0153	0.0887
	(2.17)	(1.831)	(1.011)	(1.1924)
Constant	33.9703	52.2592*	180.6061*	13.5156
	(20.1902)	(17.4764)	(10.4364)	(17.3697)
Observations (schools)	1,029	1,074	1,013	1,016
Number of students	21,856	32,912	20,125	19,564
R^2	.4213	.5013	.4080	.4749

Unadjusted standard errors are in parentheses.
*Significant at p < .05

Appendix C. School-Level Statistical Analysis: Preliminary Results

Exhibit C12
Compensatory per-pupil funding and impact on all students

Population of students: All students with test score data available
LAP variable = Amount of per-pupil LAP plus Title 1 funding the school received in 2008-09 based on number of students who scored <400 in prior year

	Math		Reading	
	4	5	4	5
Avg. prior WASL score	0.9152*	0.7148*	0.5028*	0.8184*
	(0.0335)	(0.0198)	(0.0159)	(0.0227)
Compensatory per-pupil funding	-0.0003	0.0011	-0.0001	-0.0002
	(0.0011)	(0.0009)	(0.0004)	(0.0005)
Per-pupil expenditures (minus compensatory)	0.0003	0.0011*	0.0003	0.0004
	(0.0004)	(0.0003)	(0.0002)	(0.0002)
% free/reduced price meals	-9.7413*	-16.2926*	-7.9108*	-8.6729*
	(2.2961)	(1.8775)	(0.9208)	(1.0706)
% special education	1.4809	4.1748	-1.5744	-2.632
	(6.6575)	(5.3352)	(2.6161)	(2.9669)
% transitional bilingual instructional program	-8.4897	1.1082	-1.3412	3.7061
	(4.7527)	(3.8191)	(1.8672)	(2.1357)
% American Indian	-7.5411	-6.2637	-3.4045	-4.5212
	(5.3409)	(4.1532)	(2.0903)	(2.3208)
% Asian	15.3676*	15.0081*	3.307	4.0838*
	(4.6531)	(3.7385)	(1.8069)	(2.0615)
% African American	-17.8139*	-7.2717	-7.2902*	-1.498
	(5.1333)	(4.0573)	(2.0071)	(2.2488)
% white	-1.847	1.0311	-1.8907	2.6266
	(3.4738)	(2.795)	(1.368)	(1.5607)
% males	14.0292	-3.7399	7.4117	-0.9444
	(11.3137)	(9.0135)	(4.4554)	(5.0042)
Avg. years teacher experience	0.2273*	0.044	0.1495*	0.0448
	(0.1038)	(0.0838)	(0.0408)	(0.0465)
% teachers with masters degree	3.9686	-0.6707	0.5407	-1.1501
	(2.123)	(1.7066)	(0.8334)	(0.9471)
Constant	15.9532	119.1506*	201.7214*	76.304*
	(15.8593)	(10.0372)	(7.4173)	(10.1857)
Observations (schools)	1,118	1,113	1,118	1,113
Number of students	71,475	71,629	71,132	71,434
R^2	.7449	.8231	.8096	.8312

Unadjusted standard errors are in parentheses.
*Significant at p < .05

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