FINAL EVALUATION REPORT

for the

OREGON SCHOOL LIBRARY INFORMATION SYSTEM

1999-2000 TLCF PROJECT OF STATEWIDE SIGNIFICANCE

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Purpose and Rationale of the OSLIS Project

The primary goal of the 1999-2000 OSLIS Technology Literacy Challenge Fund (TLCF) project was to assist schools in using technology to improve the achievement of all students in the various content areas.

The primary vehicle for achieving this goal was training and ongoing continued professional development support for library media specialists focusing on:

1) collaborating with teachers in planning and implementing research projects;

2) providing students and teachers instruction on the use of information technology and key information literacy skills;

3) effectively using online resources for CIM work sample-type classroom assignments and research papers; and

4) improving student achievement.

This evaluation was designed to determine the success of the OSLIS TLCF project in achieving the goal of improved student achievement and the process by which this occurred.

Procedures

Eight indicators of project success were identified for the project. These were categorized as either outcome or process indicators.

Outcome Indicators

- Student performance improves on classroom research assignments and projects making use of information literacy skills; and,
- Student performance improves over time in OSLIS schools on statewide assessments.

Process Indicators

- Students and staff exhibit increased use of information technologies and higher levels of information literacy skills;
- Students and staff use the online resources made available through OSLIS;
- Participants implement the knowledge and skills they acquire through the CPD sessions with students and staff;
- Participants gain valuable and usable knowledge and skills;
- Participants are satisfied with the content, format, quality, and likely impact of the CPD activities; and,
- CPD activities are adequate and appropriate.

Data Collection

The evaluation of 101 schools was based on surveys and existing databases. Six major data sources were used to conduct this evaluation. These included:

1. A participant satisfaction and knowledge acquisition instrument for major CPD events;
2. A follow-up implementation survey to determine what participants in the CPD activities were doing differently with teachers and students;
3. Online product usage statistics;
4. A teacher satisfaction and student learning survey;
5. Existing demographic databases available on the ODE Web site; and,
6. Oregon statewide assessment results.

Data Analysis

Both qualitative and quantitative data required a variety of analytic methodologies. Primary among these was the use of simple descriptive statistics, content analyses, and tests of statistical significance.

Evaluation Results

Results presented are for the most part descriptive and correlational. Controlled studies were not possible within the constraints of the project. As a result, no causation can be attributed directly to the OSLIS-TLCF project. Instead, a logic model and the preponderance of evidence is used to build a case for the effectiveness of the project.
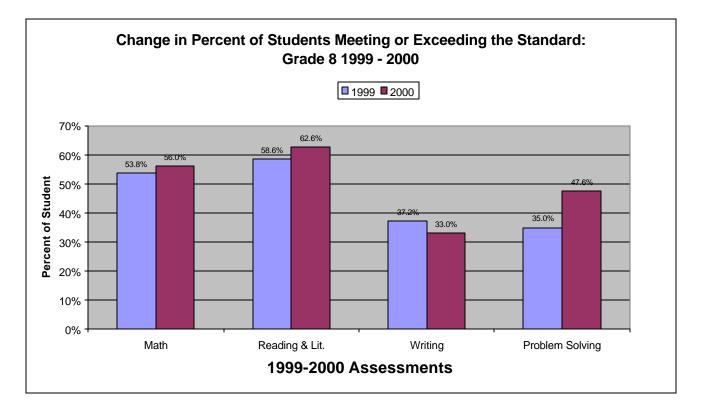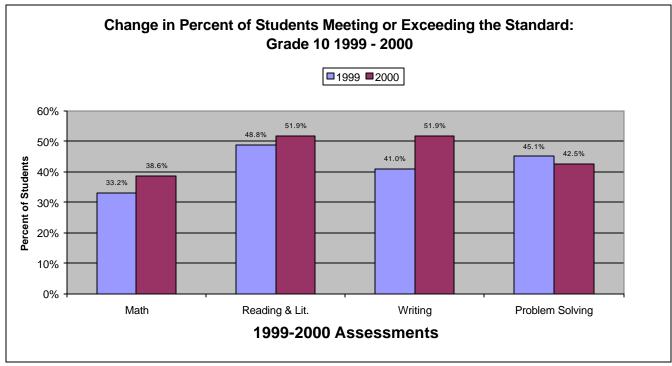
Summary of Statewide Assessment Results

State assessment results at grade eight and ten were analyzed from four perspectives.

- *Changes* in the mean percentage of students meeting and exceeding the standard for OSLIS schools as a group from 1999 to 2000 on the statewide assessments in Mathematics, Reading and Literature, Math Problem Solving, and Writing.

- *Comparisons* of the mean percentage of students meeting and exceeding the standard in OSLIS and non-OSLIS schools, as groups, on the 2000 administration of the statewide assessments in Mathematics, Reading and Literature, Mathematics Problem Solving, Writing, and Science.

- *Comparisons* of lower SES OSLIS schools and lower SES non-OSLIS schools at tenth grade on the 2000 administration of the statewide assessments in Mathematics, Reading and Literature, Mathematics Problem Solving, Writing, and Science.

- *Longitudinal changes* in the mean percentage of students meeting and exceeding the standard between the original OSLIS pilot schools, additional second round OSLIS schools and non-OSLIS schools from 1998 to 2000 in Mathematics, Reading and Literature, Math Problem Solving, and Writing.

Results are presented below.

On average, the percentage of students meeting and exceeding the standard in OSLIS schools improved from 1999 to 2000 on 6 of the 8 assessments at grades eight and ten. Significant improvements in schools-wide performance were found in both Mathematics and Reading and Literature.

**Change in Percent of Students Meeting or Exceeding the Standard:
Grade 8 1999 - 2000**

■ 1999   ■ 2000

Assessment	1999	2000
Math	53.8%	56.0%
Reading & Lit.	58.6%	62.6%
Writing	37.2%	33.0%
Problem Solving	35.0%	47.6%

Percent of Student

1999-2000 Assessments

**Change in Percent of Students Meeting or Exceeding the Standard:
Grade 10 1999 - 2000**

■ 1999   ■ 2000

Assessment	1999	2000
Math	33.2%	38.6%
Reading & Lit.	48.8%	51.9%
Writing	41.0%	51.9%
Problem Solving	45.1%	42.5%

Percent of Students

1999-2000 Assessments

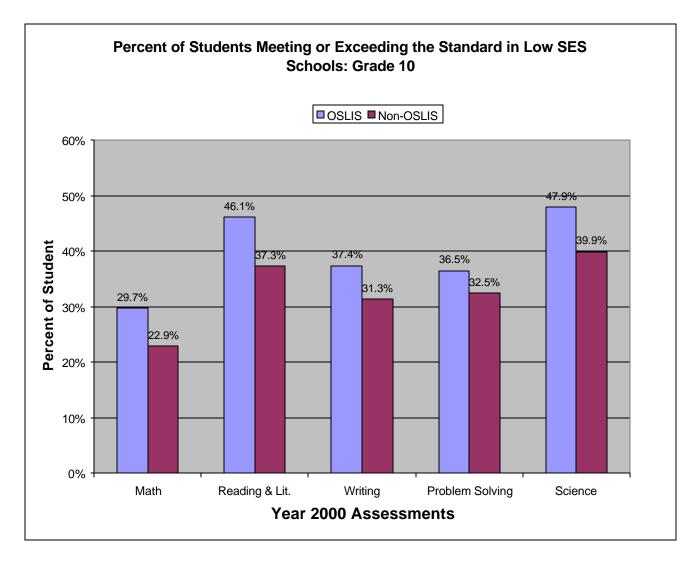Comparisons show that, on average, the percentage of students meeting and exceeding the standard in OSLIS schools was consistently higher than for non-OSLIS schools on **all** of the 2000 statewide assessments (Mathematics, Reading and Literature, Science, Writing, Math Problem Solving) at grade ten, and all but Writing at grade eight.

Percent of Students Meeting or Exceeding the Standard: Grade 8

Legend: OSLIS, Non-OSLIS

Assessment	OSLIS	Non-OSLIS
Math	56.0%	52.1%
Reading & Lit.	62.6%	60.7%
Writing	33.0%	33.7%
Problem Solving	47.6%	46.8%
Science	55.0%	52.9%

Y-axis: Percent of Students
X-axis: Year 2000 Assessments

Percent of Students Meeting or Exceeding the Standard: Grade 10

Legend: OSLIS, Non-OSLIS

Assessment	OSLIS	Non-OSLIS
Math	38.6%	30.7%
Reading & Lit.	51.8%	43.6%
Writing	42.5%	38.1%
Problem Solving	44.5%	36.7%
Science	54.7%	47.6%

Y-axis: Percent of Students
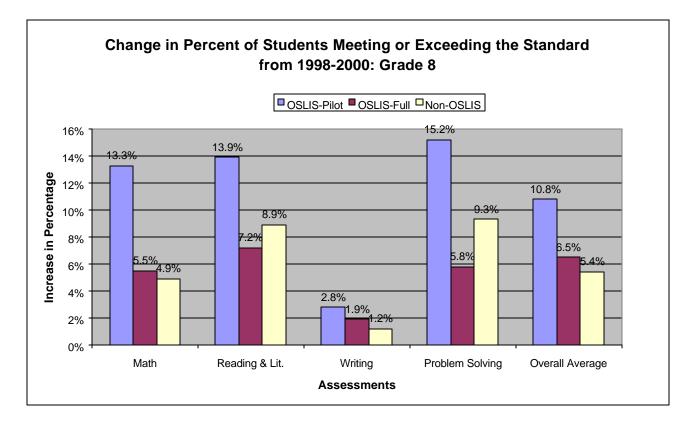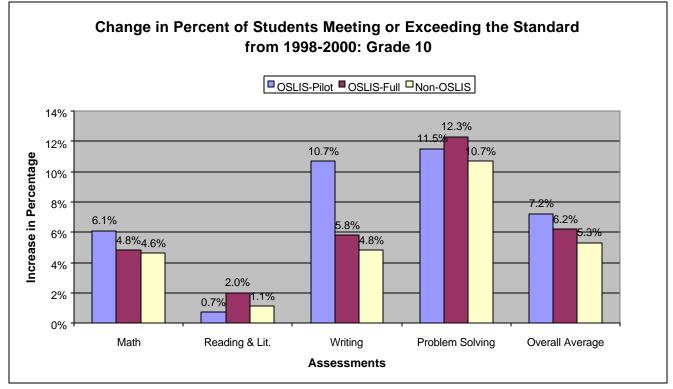X-axis: Year 2000 Assessments

Comparisons show that, on average, the percentage of students meeting and exceeding the standards at grade ten is much higher in low SES OSLIS schools than in similarly low SES schools that are not part of OSLIS in **all** of the 2000 statewide assessments (Mathematics, Reading and Literature, Science, Writing, Math Problem Solving) at both grades eight and ten.

Percent of Students Meeting or Exceeding the Standard in Low SES Schools: Grade 10

Assessment	OSLIS	Non-OSLIS
Math	29.7%	22.9%
Reading & Lit.	46.1%	37.3%
Writing	37.4%	31.3%
Problem Solving	36.5%	32.5%
Science	47.9%	39.9%

Year 2000 Assessments (x-axis), *Percent of Student* (y-axis)

Comparisons show that, on average, the percentage of students meeting and exceeding the standard in Mathematics, Reading and Literature, Writing, and Math Problem Solving in OSLIS schools has increased more than in non-OSLIS schools over the three years. Typically, the longer the school has been a part of OSLIS, the greater the change.
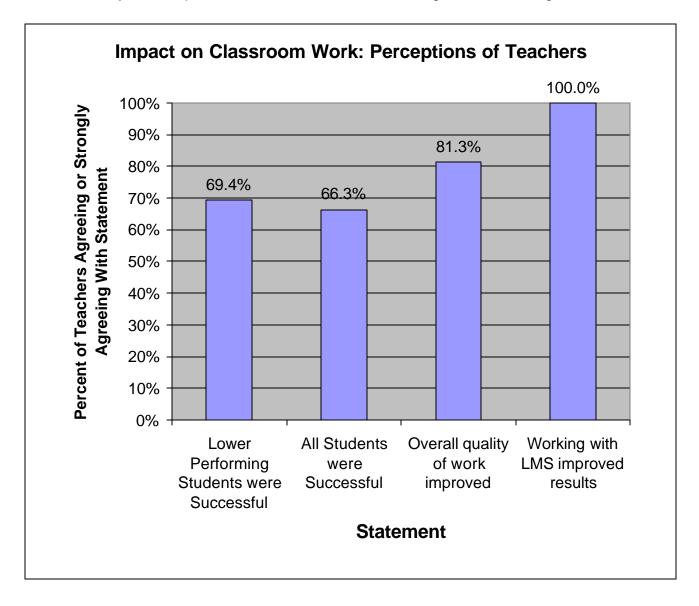
Change in Percent of Students Meeting or Exceeding the Standard from 1998-2000: Grade 8

Legend: OSLIS-Pilot, OSLIS-Full, Non-OSLIS

Y-axis: Increase in Percentage (0% to 16%)
X-axis: Assessments

Assessment	OSLIS-Pilot	OSLIS-Full	Non-OSLIS
Math	13.3%	5.5%	4.9%
Reading & Lit.	13.9%	7.2%	8.9%
Writing	2.8%	1.9%	1.2%
Problem Solving	15.2%	5.8%	9.3%
Overall Average	10.8%	6.5%	5.4%

Change in Percent of Students Meeting or Exceeding the Standard from 1998-2000: Grade 10

Legend: OSLIS-Pilot, OSLIS-Full, Non-OSLIS

Y-axis: Increase in Percentage (0% to 14%)
X-axis: Assessments

Assessment	OSLIS-Pilot	OSLIS-Full	Non-OSLIS
Math	6.1%	4.8%	4.6%
Reading & Lit.	0.7%	2.0%	1.1%
Writing	10.7%	5.8%	4.8%
Problem Solving	11.5%	12.3%	10.7%
Overall Average	7.2%	6.2%	5.3%

Improvements in Student Performance on Classroom Assignments

Teachers overwhelmingly felt that students had greater success in finding more, and more relevant, information to support their projects than in the past. This success, they felt, led to higher levels of success and higher overall levels of quality in student work.

Teachers were also unanimous in attributing a portion of this improvement in student performance to working with the library media specialist in planning the project, providing instruction around information technology generally, information literacy skills, and the use of the online databases made available through the project.

Anecdotally we have learned over the past several years that student performance will not change significantly until teachers change their assignments and expectations to take full advantage of what is offered through OSLIS. The project purposely built collaboration between library media specialists and teachers into the design to acknowledge this.
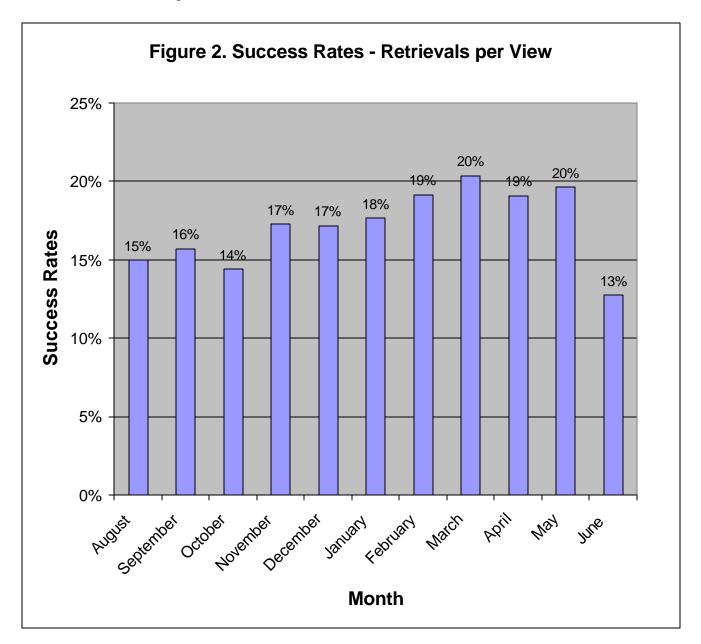
Impact on Classroom Work: Perceptions of Teachers

A bar chart titled "Impact on Classroom Work: Perceptions of Teachers". The vertical axis is labeled "Percent of Teachers Agreeing or Strongly Agreeing With Statement" ranging from 0% to 100%. The horizontal axis is labeled "Statement".

- Lower Performing Students were Successful: 69.4%
- All Students were Successful: 66.3%
- Overall quality of work improved: 81.3%
- Working with LMS improved results: 100.0%

Use of Information Technology and Level of Information Literacy Skills

The evidence we have to judge whether this indicator of success has been achieved is varied, but when triangulated, does support there being higher levels of information technology use and higher levels of information literacy in schools where implementation has been most successful.

Participating library media specialists do indicate positive changes in both teachers and students as a result of implementing what they learned at the OSLIS trainings. Furthermore they are able to describe with clarity what these changes are.
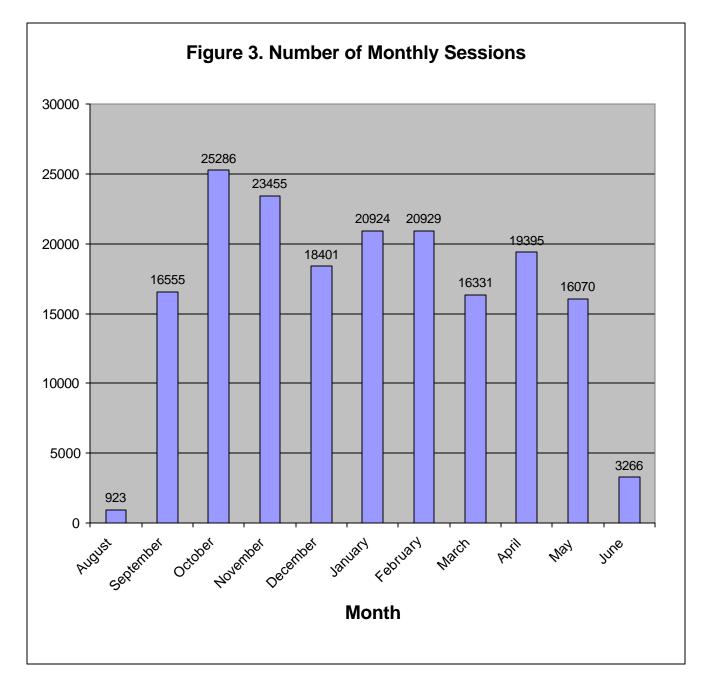
Finally, usage data would indicate that student information literacy skills improved through more efficient searching of the databases.

Figure 2. Success Rates - Retrievals per View

Use of Online Databases

Usage statistics provided by the vendor of the online resources provide concrete evidence that students and staff at participating OSLIS schools are using the resources.

- Students and staff conducted over 180,000 sessions on these resources this year.
- Students and staff spent nearly 26,000 hours logged into the databases.
- Students and staff printed, downloaded, or e-mailed to themselves over 47,000 full-text articles to support the development of research papers and class assignments.
- While 91.3% of sessions were conducted during the school day, there were still over 15,000 sessions conducted after school, at night, or on the weekends, with the highest percentage of these non-school day sessions occurring in January and June.

Figure 3. Number of Monthly Sessions

Month	Sessions
August	923
September	16555
October	25286
November	23455
December	18401
January	20924
February	20929
March	16331
April	19395
May	16070
June	3266

Implementation

Follow-up data indicate that participants did in fact implement the strategies and ideas they had acquired in the OSLIS trainings to some degree. Participants also indicated, however, that they planned to do more to further implement the goal of increasing student achievement by infusing the use of information technologies and access to online resources with instruction around information literacy. This was the case both in working with teachers and students, at all levels of schooling - elementary, middle, and high school.

The level of implementation was to some extent, however, mediated by a recurring set of challenges faced over the years in OSLIS. Principal among these was carving out time from busy teachers' schedules to provide inservice, training, and to collaborate on instructional planning that takes full advantage of what is offered through OSLIS.

Some of the other challenges were technical in nature and simply beyond the control of participants. These technological challenges do point up the importance of technology infrastructure, technology support, and communication in maintaining consistent access to these resources on a school-wide basis.

In summary, implementation was uneven across sites and across students and teachers within sites. This is not an unexpected result, given time constraints on the part of teachers, different levels of receptivity to change, different levels of comfort and skills in using information technology, etc.

Quality of CPD Activities

The summer sessions were based on both the needs of the TLCF project and the needs of the participants. Three sessions were held across Oregon to allow all participants convenient participation.

With the exception of pre-meeting information, over 90% of participants were very satisfied will all aspects of the sessions, including: organization, logistics and accommodations, presenters, ideas and activities shared, materials, relevancy, and overall quality.

Of the 435 specific questions generated by participants 343 (78.9%) were answered satisfactorily. Only about 5% were judged to have gone unanswered.