The benchmarks for school libraries in the state are ratios that should make it easier to compare your library’s figures with those for other libraries, either individually or grouped by school level or enrollment range. These ratios address both library resources (e.g., staffing, the collection, funding) and services (e.g., cooperation between library staff and classroom teachers, circulation).

### STAFFING RATIOS

Benchmarks for school library staffing are provided by two ratios: endorsed school librarian hours per 100 students and total library staff per 100 students.

**Hours of Endorsed School Librarians per 100 Students**

_Hours of endorsed school librarians per 100 students_ is calculated as follows: the number of hours per week of school librarians endorsed by the Colorado Department of Education divided by the number of students enrolled in the school, divided by 100:

\[
\text{Endorsed School Librarian hours ÷ (Students Enrolled ÷ 100) = Endorsed School Librarian hours per 100 Students}
\]

This ratio is a measure of the extent to which a library’s operations are supervised by a library professional whose training has been endorsed by the state.

**Total Library Staff per 100 Students**

_Total library staff hours per 100 students_ is calculated as the total number of weekly hours of library staff divided by the number of students enrolled in the school, divided by 100:

\[
\text{Library Staff Hours ÷ (Students Enrolled ÷ 100) = Library Staff Hours per 100 Students}
\]

This ratio is a measure of the extent to which a library is adequately staffed, taking into consideration the number of students served by the library.
WEEKLY SERVICE RATIOS

Benchmarks for weekly library services are provided by six ratios: library visits per student, library group visits per 100 students, information skills instruction (IS) visits per student, IS group visits per 100 students, circulation transactions per student, and the ILL per 100 circulation ratio.

**Library Visits by Individual Students and by Groups**

*Library visits per student* is calculated as the number of visits to the library by individual students divided by the number of students enrolled in the school. Each of the weekly service ratios is calculated in the same manner as library visits per student. For example:

\[
\text{# of Student visits to Library} \div \text{Students Enrolled} = \text{Library Visits per Student}
\]

This ratio is a measure of the frequency with which students use the library in general. In lieu of figures on uses of electronic information resources, this ratio is an important supplement to the circulation ratio.

**Circulation Transactions per Student**

*Circulation transactions per student* is calculated as the number of times library materials are charged out to users divided by the number of students enrolled in the school:

\[
\text{Charge-outs} \div \text{Students Enrolled} = \text{Circulation Transactions per Student}
\]

This ratio is the traditional library use measure, but also includes non-book formats such as issues of print magazines, video materials, and computer software packages, when such items are circulated.

**Interlibrary Loans per 100 Circulation Ratio**

The *interlibrary loans (ILL) per 100 circulation ratio* was not done for 2001 because of data quality issues.

PERCENTAGE OF WEEKLY LIBRARY STAFF HOURS SPENT IN LEADERSHIP OR COLLABORATIVE ACTIVITIES

In 1999, the Library Research Service did a major study of Colorado school library statistics, evaluating the impact of school library staff, services, and resources on test scores. Published in 2000, *How School Librarians Help Kids Achieve Standards* clearly demonstrates that library staff involvement in leadership activities such as committee
service and technology management, as well as increased staff collaboration with faculty and students positively impacts test scores.

**Time spent in Leadership**
There were four variables identified as leadership hallmarks: meeting with library staff, working with or meeting with school principal/administration, attending faculty meetings, and participating in standards and/or curriculum committees. Each variable was calculated in the same manner as the percentage of time spent in meetings with principal/administration.

The percentage of staff hours spent meeting with the principal or other administration is calculated as follows: the number of hours paid library staff spend in such meetings divided by the total number of hours worked by such library staff.

\[
\frac{\text{Library Staff Hours Working/Meeting with Administration}}{\text{Library Staff Hours Worked}} = \text{Percentage Hours Meeting with Administration}
\]

**Time spent in Collaboration**
There were six variables identified as hallmarks of a collaborative approach: planning with teachers, teaching cooperatively with teachers, providing in-service to faculty, offering reading incentive activities, developing collections, and managing technology that links the students to the library or to other information resources. Each variable was calculated in the same manner as the percentage time spent planning with faculty.

The percentage of staff hours spent planning with faculty is calculated as follows: the number of hours paid library staff spend planning divided by the total number of hours worked by such library staff.

\[
\frac{\text{Library Staff Hours Planning with Teachers}}{\text{Library Staff Hours Worked}} = \text{Percentage Hours Planning with Teachers}
\]

**COLLECTION RATIOS**

Benchmarks for library collection development are provided by five ratios: volumes per student, print subscriptions per 100 students, audio materials per 100 students, video materials per 100 students, and computer software per 100 students.

**Volumes per Student**
*Volumes per student* is calculated as the number of print volumes in the library collection divided by the number of students enrolled in the school:

\[
\frac{\text{Print Volumes}}{\text{Students Enrolled}} = \text{Volumes per Students}
\]
This ratio indicates the size of the library’s book collection in relation to the size of the student body it is designed to serve.

It is important to consider this ratio in relation to collection ratios for other formats (e.g., electronic subscriptions, videos, software), as well as the circulation ratio. If volumes per student is relatively high, the percentage of non-circulating materials in the collection is relatively low. If circulation per student is relatively low, it may be time to consider weeding the collection and/or revising the library’s collection development policy.

**Print Subscriptions per 100 Students**

Print subscriptions per 100 students is calculated as the number of periodicals (magazines and newspapers) to which the library subscribes in print divided by the number of students enrolled in the school, divided by 100:

\[
\text{Print Periodicals} \div (\text{Students Enrolled} \div 100) = \text{Print Subscriptions per 100 Students}
\]

This ratio indicates the scope of the library’s print periodical holdings in relation to the size of the student body.

Over the next few years, it will be particularly important to monitor changes in this ratio relative to those for electronic subscriptions. Changes in the ratio should also be related to the change in per student spending for print and electronic subscriptions, as well as the capital investment in equipment required to access electronic formats.

**Video Materials per 100 Students**

Video materials per 100 students is calculated as the total number of video materials (e.g., video cassettes, DVDs) in the library collection divided by the number of students enrolled in the school, divided by 100:

\[
\text{Video Materials} \div (\text{Students Enrolled} \div 100) = \text{Video Materials per 100 Students}
\]

This ratio indicates the size of the video collection in relation to the size of the student population. Notably, unlike electronic subscriptions and computer software, video materials tend to be used by whole classes or groups of students rather than by individuals.

**Audio Materials per 100 Students**

Audio materials per 100 students is calculated as the total number of audio materials in the library collection divided by the number of students enrolled in the school, divided by 100:

\[
\text{Audio Materials} \div (\text{Students Enrolled} \div 100) = \text{Audio Materials per 100 Students}
\]
**Computer Software Packages per 100 Students**

*Computer software packages per 100 students* is calculated as the total number of licensed computer software packages included in the library collection divided by the number of students enrolled in the school, divided by 100:

\[
\text{Licensed Software Packages} \div (\text{Students Enrolled} \div 100) = \text{Software Packages per Student}
\]

**FUNDING RATIOS**

Benchmarks for library funding are provided by five ratios: print materials expenditures per student, electronic format expenditures per student, non-print materials expenditures per student, electronic access expenditures per student, and total operating expenditures per student.

**Print Materials Expenditures per Student**

*Print materials expenditures per student* is calculated as total spending for print formats divided by the number of students enrolled in the school:

\[
\text{Print Expenditures} \div \text{Students Enrolled} = \text{Print Expenditures per Student}
\]

This ratio indicates the level of spending on print materials relative to the size of the student body. From year to year, maintenance of a library’s buying power depends on increases in such funding to account for increases in enrollment and/or increases in average costs for books and periodicals.

**Electronic Format Expenditures per Student**

*Electronic format materials (e.g., software, CD-ROM, laser disk, locally mounted databases) expenditures per student* is calculated as total spending for electronic formats divided by the number of students enrolled in the school:

\[
\text{Electronic Format Expenditures} \div \text{Students Enrolled} = \text{Electronic Format Expenditures per Student}
\]

This ratio indicates the level of spending on electronic format materials relative to the size of the student body. As with print expenditures, maintenance of a library’s non-print buying power relies on increases in such funding to support increases in enrollment and/or increased charges from vendors of electronic resources.

**Non-Print Materials Expenditures per Student**

*Non-print materials expenditures per student* is calculated as total spending for non-print formats (e.g., audio, video, microform) divided by the number of students enrolled in the school:
Non-print Expenditures ÷ Students Enrolled = Non-print Expenditures per Student

This ratio indicates the level of spending on non-print materials relative to the size of the student body.

Potentially, the shift from “just in case” print collections to “just in time” electronic access to information could stabilize— even reduce—the costs of library operation. Alas, among the many changes being wrought in the “information age” are those of how information as a commodity is priced. Whether or not savings occur as a result of the shift from print to electronic resources may depend largely on how electronic information is “packaged” (e.g., CD-ROM, laser disk, mini-disk, online access) and priced (e.g., quarterly or annual subscriptions, fee-for-use).

Total Operating Expenditures per Student

Total operating expenditures per student is calculated as the sum of print materials, electronic format acquisitions, electronic access, and other non-print materials costs and supplies and other operating costs divided by the number of students enrolled in the school:

\[
\frac{(\text{Print} + \text{Non-print} + \text{Access} + \text{Other Operating Costs})}{\text{Students Enrolled}} = \text{Total Materials Expenditures per Student}
\]

This ratio indicates the overall cost to the library of providing access to its collection and electronically networked information.