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ABSTRACT

This report presents comprehensive recommendations in the library budget formula area for public 2- and 4-year institutions in Washington based on recommendations adopted by the council in 1976 with some revisions. A review and analysis of statistical data supplied by the 4-year institutions and community college system in the areas of staffing, collections, usage, acquisitions, and institution size, provides the basis for the recommendation that the library resources portion of the formula be stated in terms of number of acquisitions per year, based on mathematically determined relationships of acquisitions to collection size derived from the experience of comparison institutions and states. These acquisition units would then be converted into dollar amounts based on each institution's experienced unit costs adjusted for inflation. Questions were raised regarding staff years, branch libraries, and the standard dollar amounts for staff years and binding. These questions were primarily related to the interpretation of the recommendations and accompanying definitions and guidelines contained in the council's final report. As a consequence, slight modifications to three recommendations, more explicit guidelines, and specific examples of interpretations of recommendations have been added to the "Operations Element" section of the report. (Author/CWM)

LIBRARY FORMULA

REPORT AND RECOMMENDATIONS

October, 1978

Project Officer:

Norman M. Fischer

PREFACE

The Council's development of budget formulas continues to reflect a philosophy that strives for reasonability, equity, and consistent treatment for both two- and four-year institutions. In addition, if adjustments in formula support levels are needed to correct inequities, the Council remains committed to an approach that would accomplish these corrections through increases in funding rather than through redistribution of current funding levels.

The Council's follow-up review of the Library Formula has been extensive and has resulted in the development of an entirely new methodology for determining the level of acquisitions in the "resources" portion of the formula. Prior to the submission of the final report in June, two progress reports were presented to the Council. Progress reports in March and April explored in detail the new approach which was under development in the resources area. The "operations" portion of the formula remains virtually unchanged from the Council's recommended approach contained in the September, 1976 library formula report.

The June report, which was transmitted to Governor Ray, the Office of Financial Management, the Chairmen of the respective House and Senate Higher Education and Fiscal Committees and their staffs, and institutional representatives for their information, was conditionally approved by the Council at its June meeting, pending follow-up analysis of the formula's relationship to the Washington Library Networking System and the addition of statements which would ensure the continuation of appropriate deletion programs in the two-and four-year institutions. This final report reflects the added information. The recommendations remain unchanged from the June report. The following resolution was passed by the full Council on Thursday, September 21, 1978:

> *"Resolved, that the Council for Postsecondary Education adopts the Library Formula recommendations as presented in the June, 1978 staff report with additions to the narrative as recommended in the September, 1978 staff report;*
>
> *Resolved further, that the Council urges the uniform application of the revised formula in attaining equitable funding among the four-year institutions and the community college system and common treatment of audio-visual media materials and staffing as a major noncomparable item outside the formula for all institutions, and that adjustments in formula levels to correct inequities should be accomplished by increases in funding rather than through redistribution, and*
>
> *Resolved further that, during the next biennium, the Council for Postsecondary Education join with the State Board for Community College Education and other interested institutions in a thorough study of institutional library comparisons, resources, needs and formula format."*

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ABSTRACT

This report represents the Council's second effort in developing comprehensive recommendations in the library formula area for the public two- and four-year institutions in Washington. There are two new substantive recommendations in the resources portion of the formula. Also, a slight change has been made in the definition of a library resource unit. In addition, slight modifications were made to three recommendations in the operations portion of the formula. The remaining recommendations are those adopted by the Council in 1976.

The first report was transmitted to the Governor and Legislature in September, 1976. Generally, all parties felt the 1976 revisions represented considerable improvement over the original two- and four-year formulas. However, in implementing the Council's recommendations for inclusion in the 1977-79 biennial budget, several questions and various concerns developed, primarily in the resources portion of the formula. Based on the various concerns, both the executive budget, as well as the final legislative Appropriations Bill, directed the Council to continue its review of the library formula.

As a result of this dual directive, the current review has been extensive and has included the analysis of considerable amounts of data. Based on this effort, the report recommends that the library resources portion of the formula be stated in terms of number of acquisitions per year based on mathematically determined relationships of acquisitions to collection size derived from the experience of comparison institutions and states. These acquisition units would then be converted into dollar amounts based on each institution's (and the community college system's) experienced unit costs adjusted for inflation.

In terms of the operations portion of the formula, questions were raised regarding staff years, branch libraries, and the standard dollar amounts for staff years and binding. These questions were primarily related to the interpretation of the recommendations and accompaning definitions and guidelines contained in the Council's final report. As a consequence, slight modification to three recommendations, more explicit guidelines, and specific examples as to how the recommendations are to be interpreted have been added to the "operations element" section of the report.

I. Summary of Recommendations

General

Existing Recommendations (Information Only)

(1) That the library formula contain two elements: (1) a library resources element, and (2) a library operations element, with both elements relating to dollars for the fiscal period.

(2) That the two- and four-year institutions use common budget request forms.

Library Resources Element

(For Council Action)

(1) That the definition for a unit of library resources as delineated in Appendix C be accepted.

(2) That resource unit acquisitions entitlement for the four-year institutions and the community college system be based on mathematically determined percentage relationships between actual collection size and annual acquisition rates. (The analysis, methodology and resultant mathematical equations are explained in detail on Pages 21 - 32).

(3) That the per unit cost for resources be unique to each four-year institution and the community college system and be based on historical multi-year expenditure patterns for all resource units purchased, exclusive of audio-visual/media materials.

Library Operations Element

Existing Recommendations (Information Only)

(1) That all the library operations element categories be divided by 300 to determine staff years.

(2) That there be four "FTE student" categories (100/200, 300/400, 500 and 600/700) with weights of 1.000, 2.000, 4.000 and 6.000 as four of the library operations elements.

(3) That there be a "maintenance of current collection" category with a weight of 0.0135 as one of the library operation elements.

(4) That there be a "new acquisition" category with a weight of 0.270 as one of the library operations elements.

(5) That there be a "base staffing" entitlement allowing three (3) additional staff years per four-year institution or two (2) per branch library and 54 (2 x 27) additional staff years for the community college system.

(6) That the two- and four-year institutions use common budget request forms.

Amendments (For Council Action)

(7) That there be an "institutional staff year" category with a weight of 1.000 as one of the library operation elements.

(8) That binding costs be a major sub-element with the overall library operations element. It is further recommended that the basis for determining binding costs be the current total subscription units times 1.200 (weighting factor to handle rebinding) times a standard dollar value per unit bound. It is further recommended that the standard dollar amount be determined by the Office of Financial Management after consultation with the state printer and adjusted for inflation for each year of the ensuing biennium.

(9) That a standard dollar amount per staff year be adopted that would include fringe benefits and operations costs. It is further recommended that this standard dollar amount have as its base the Higher Education Personnel Board classification for a library specialist I (step two) for the four-year institutions and the community college system.

II. Background and Summary Discussion: Library Formula

Background

Formulas for the measurement of library resources and assessing staffing levels have been in use in the State of Washington since 1969. In the original formula, the library resources portion measured holdings against predetermined formula values and the operations portion measured staffing levels against formula requirements for the year in question.

The original four-year library formula was applied to what is referred to as the "comparable" area within the library budget program. In addition, the library budget programs for the four-year institutions included several "noncomparable" elements such as: speciality libraries (law, medicine, etc), the audio visual/media area, curriculum laboratories, closed circuit television and those aspects of an archives which deal solely with an institution's history. Organized collections, records management and non-recurring and self-sustaining activities also received separate ("noncomparable") consideration.

The standards and criteria for the original two-year formula were developed after the four-year model had been completed. The formula used by the community college system was also divided into two parts (resource units and staffing). However, the community college approach used different staffing criteria as well as system-wide dollar values for both resource units and staff years to arrive at a total dollar request. In addition, the two-year formula was all encompassing (no noncomparable areas) and included a component for the audio-visual area. See Appendix D for a summary of the formula standards which were included in the 1976 revisions.

As mentioned earlier, the original formula based resource entitlement on how many units (current holdings) each institution had in relationship to a set of predetermined standards. Since many of the formula calculations were based on actual experience, management decisions involving day-to-day operations had a direct impact on the budget formula factors used in future budget requests. In addition, the way the original formula was structured, sudden changes in the number of students, faculty or graduate programs could inflate or deflate the percentage of formula. Without adding a resource unit, those institutions that experienced enrollment declines in the early seventies experienced increases in their overall percentage of formula positions.

Prior to the 1975-76 review, an advisory task force composed of two- and four-year people was selected. The advisory group included academic officers, library/media directors, as well as financial/fiscal personnel. The review process that led up to the 1976 Council recommendations included an analysis of formulas currently in use in Washington, as well as outside the state. There was a careful review of the findings and subsequent recommendations contained in the 1974 Legislative Budget Committee review of formulas. There was also extensive input from the Office of Financial Management in terms of the Governor's directive asking the Council to prepare recommendations for improvement of existing formulas, and to propose new formulas for areas not now covered. During 1975 and early 1976, the advisory task force met three times as a group; there were several sub-task force meetings; and numerous one-on-one consultations, both in person and on the phone before staff recommendations were formulated and presented to the Council.

The revised library formula and the recommended approach adopted by the Council in September, 1976 were not accepted by either the executive or legislative branches of government. Both the executive budget, as well as the final legislative Appropriations Bill, directed the Council to continue its review of the library formula. The Council's section of the 1977-79 Appropriations Bill included a subsection which stated: "Not more than $25,000 shall be expended to continue reviewing existing and developing new Instructional and Library Formulas."

As a result of this dual directive, there has been extensive contact with library and fiscal personnel at the two- and four-year institutions during fiscal year 1978. Discussions have also included two- and four-year people who have state-level responsibilities. Several meetings have been held with those executive and legislative analysts who had budgetary responsibilities for the 1977-79 biennial budget, as well as those analysts who are expected to have budgetary responsibilities for the 1979-81 budget cycle.

Major Areas of Concern

Generally, all parties felt the 1976 revisions represented considerable improvement over the original formula. However, in implementing the Council's recommendations for inclusion in the 1977-79 biennial budget, several questions were raised concerning the revised formula. Major areas of concern and subsequent controversy with the revised formula have been confined primarily to the resources portion of the formula and include the following issues:

-- The method used to calculate the five percent currency adjustment;

-- The use of a standard dollar concept for other resource units when actual experience was to be used for periodicals and serials;

-- The assumptions used to determine the standard dollar value for resource units;

-- Acceptance of a concept that stressed dollars rather than the number of resource units;

-- The continued questions as to the accuracy of existing library inventories and other pertinent data; and

-- General confusion with the replacement adjustment and its relationship to actual deletions and losses.

In terms of the operations portion of the formula, questions were raised regarding staff-years, branch libraries, and the standard dollar amounts for staff years and binding. These questions were primarily related to the interpretation of the recommendations and accompanying definitions and guidelines contained in the Council's final report. More explicit guidelines and specific examples as to how the recommendations are to be interpreted have been added to the "operations element" section of the report.

During final consideration of the library formula at its June, 1978 Council Meeting, a concern was raised regarding the interrelationship of the formula to the Washington Library Networking System. Final Council action in September, 1978, reflects the addition of the following section.

Washington Library Networking System

The library networking system under development in the State of Washington represents one of the most comprehensive automated library systems undertaken. The overall system is made up of four components: Interlibrary Loans, Reference and Referral, Telecommunications and the Computer Networking System. The latter component is designed for implementation through five subsystems: Biblographic, Acquisitions, Circulation, Detailed Holdings and Serials Control. According to State Library personnel, these subsystems are integrated to minimize

the duplication of information in the data base and to simplify access. The Bibliographic and Acquisitions Subsystems are currently in operation at several institutions and public libraries. The Circulation Subsystem is being tested and is expected to be available later this year. Detailed Holdings and Serials Control implementation are still in the development stages.

The purposes of the Washington Library Networking System are to:

1. Improve library responses to informational inquiries;
2. Facilitate resource sharing among libraries of all types;
3. Reduce unnecessary duplication of effort among libraries;
4. Provide automated support for all library operations;
5. Improve accuracy, consistency and completeness in bibliographic records;
6. Provide for interface with other regional and national networks; and
7. Allow flexibility for system growth, new types of participants and changing priorities.

Initially funding for development included state fund appropriations with some federal grant funds. Legislation passed in March, 1976 established a revolving fund for the Computer Networking System which is to be replenished by participating libraries by charging user fees. Approval of fees is the joint responsibility of the Washington State Library Commission and the Data Processing Authority. The funding system calls for each participating library to pay for its own direct costs. The costs of maintaining the data base and of

computer center operations is shared among participants in proportion to the use each makes of the system. Each participating library assumes the full cost of its own equipment, telecommunications, and system products. According to state library personnel, no additional funds will be needed to support the revolving fund concept. Federal funds are being sought, however, to help offset the development of the Serials Subsystem.

In discussing the concept of the network and resource sharing with State Library personnel, it is clear that the emphasis of the system is on service stressing voluntary participation. The decision as to whether to utilize any given subsystem is up to the participant. In addition, when fully operational at an institution, the concept calls for full freedom of choice relative to acquisitions. That is, there is no intent to overlay a centralized purchasing mechanism for the state supported institutions.

The interest of the public two- and four-year institutions varies. Eighteen of the community colleges are currently full participants. The Evergreen State College is a full participant, while the remaining four-year institutions vary in their commitment. For instance, the two doctoral universities are involved in development work on the Serials Subsystem, while the three regional universities are currently assessing their potential use of the network before committing any institutional resources to the system.

There appears to be nothing in the networking system framework that would conflict with the Council's library formula recommendations.

In the resources area, since the institutions are not now purchasing all the material being printed, there appears to be no need to alter the acquisitions curves that have been developed. As a matter of fact, even if resource sharing becomes widespread, an institution may choose to purchase as many units as in the past, but purchase multiple copies of high demand items or single copies of very high cost items.

In the operations area, the standard dollar concept is made to order in terms of trade-off management flexibility; that is, the library director has the option to vary the mix of people and computer services. Since full implementation of the networking system is in the future, cost data are limited; therefore, the cost relationships and assumptions included in the formula will need to be monitored to determine whether a higher or lower percent of formula will be needed in the future assuming a larger role for the networking system.

Conclusions

The current review has been extensive and has included the analysis of considerable amounts of data. Based on this effort and the time devoted to this project over the last three years, the following conclusions have evolved.

1. Our analysis indicates that discrete formula factors that apply equitably to institutions as diverse as those in Washington are difficult to achieve. Our experience in review of various proposals indicates that nearly every

alternative is subject to extensive debate and disagreement. This is especially true in trying to define an optimum or appropriate library size for diverse institutions. For example, during our review of the past research in this area as it relates to community colleges, it was found that in 1965 the American Library Association in an article entitled: National Inventory of Library Needs suggested an opening day collection size of 20,000 volumes for an enrollment up to 1,000 full-time equivalent students. The association went on to suggest that for each additional 500 students, 5,000 volumes should be added. If these assumptions were applied today to Washington's 80 plus thousand full-time equivalent community college students, the community college system's current collection size of approximately one million volumes would come close to equaling 100 percent. Also, the doctoral universities have raised questions on several occasions regarding the use of the same "standards" for all four-year institutions. The Evergreen State College on the other end of the spectrum has raised questions concerning the applicability of the four-year formula "standards" to their institution. This discussion is included to illustrate the difficulty of determining optimal or appropriate collection size using discrete formula factors.

2. In the library resource area, formula factors have been used as a basis for building budgets since the 1969-71 biennium. During that time, the executive and legislative branches have had extensive

exposure to those factors and the arguments advanced in their support and no serious effort at formula equalization has been attempted at the state level. At the same time, the four-year institutions and the community college system have had ample opportunity from an institutional perspective, through internal priorities, to effect decisions that would influence respective collection sizes. Again no substantial changes in relative status have occurred.

3. After a thorough and extensive evaluation of collection size versus annual acquisitions for two- and four-year institutions in the comparison states used by Washington institutions, it was felt that a comparison-based approach using actual collection size would represent a more meaningful and realistic alternative to the use of numeric hypothetical formula factors.

Revised Formula Framework

The revised formula excludes the "noncomparable" elements outlined earlier. The Audio Visual/Media element is to be excluded from the formula framework for both two and four-year institutions. Also, the resources associated with new degree programs are to be treated separately; that is library needs for all new programs should be based on an assessment of the depth of the institution's current library holdings coupled with the goals and objectives of the proposed new program. With this degree of flexibility, resource entitlement would be allowed to range from zero to whatever number of resource units are needed to bring a new quality program on line. Any additional funding necessary for library resources related to new programs should occur in the first full biennium immediately following final approval of the program.

Based on our conclusions, coupled with a conscious effort to alleviate the concerns outlined above, the overall objective of the library resources element is to present a straightforward approach which bases annual resource acquisition rates on variable equations. The adjusted equations which represent 100 percent of formula for the community college system and the four-year institutions are represented by the uppermost line depicted in the illustrations in Appendix E. Figure I on the following page provides the two regression lines, the adjusted equations and a transitional line connecting the two equation-based lines. The number of volumes in each of the four-year institution's collection* along with the average institutional holdings of the community colleges, will be used to calculate the respective percentage factors prior to the determination of annual resource acquisition entitlement at 100 percent of formula. The percentage factors are then applied to collection size (prior to deletions) to determine formula acquisitions. The per unit cost for resources will be unique to each four-year institution and the community college system. The respective costs will be based on actual expenditure patterns for all resources including serials and periodicals over the previous four years and adjusted for anticipated price increases. Exhibit I provides an outline of the proposed process.

The library operations element in the revised formula is made up of two parts (operations and binding). The operations portion of the formula is based on factors reflecting full-time equivalent students weighted at four levels of instruction, total staff-years including faculty, maintenance of the current collection and new acquisitions in addition to a base staffing

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*- In an effort to improve on actual collection size counts, the definition and accompaning explanation describing resource units have been subjected to minor revisions. (See Appendix C).

FIGURE I

Four-Year and Community College System
Currency, Replacement and Collection Improvement
Entitlement Curves

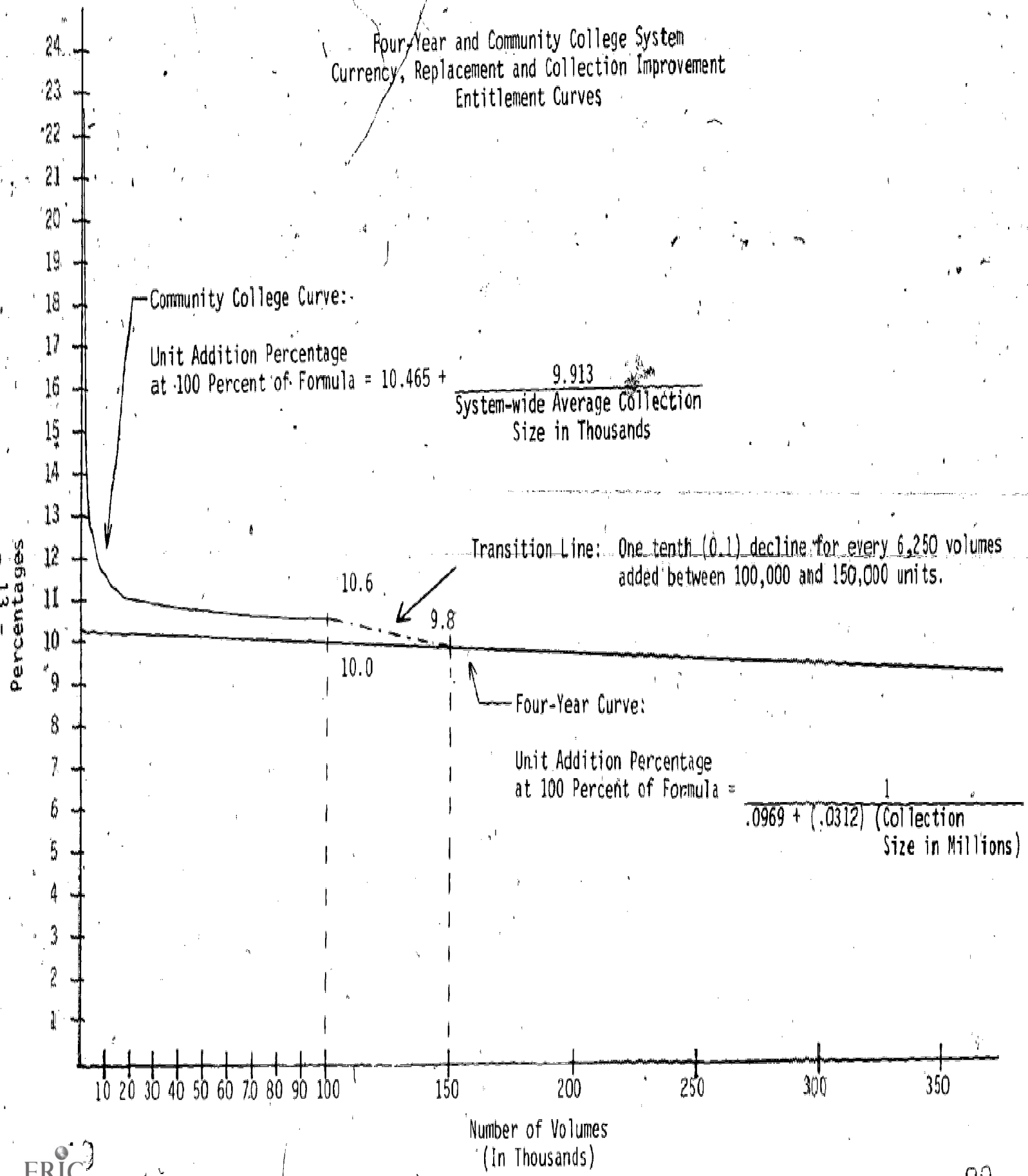
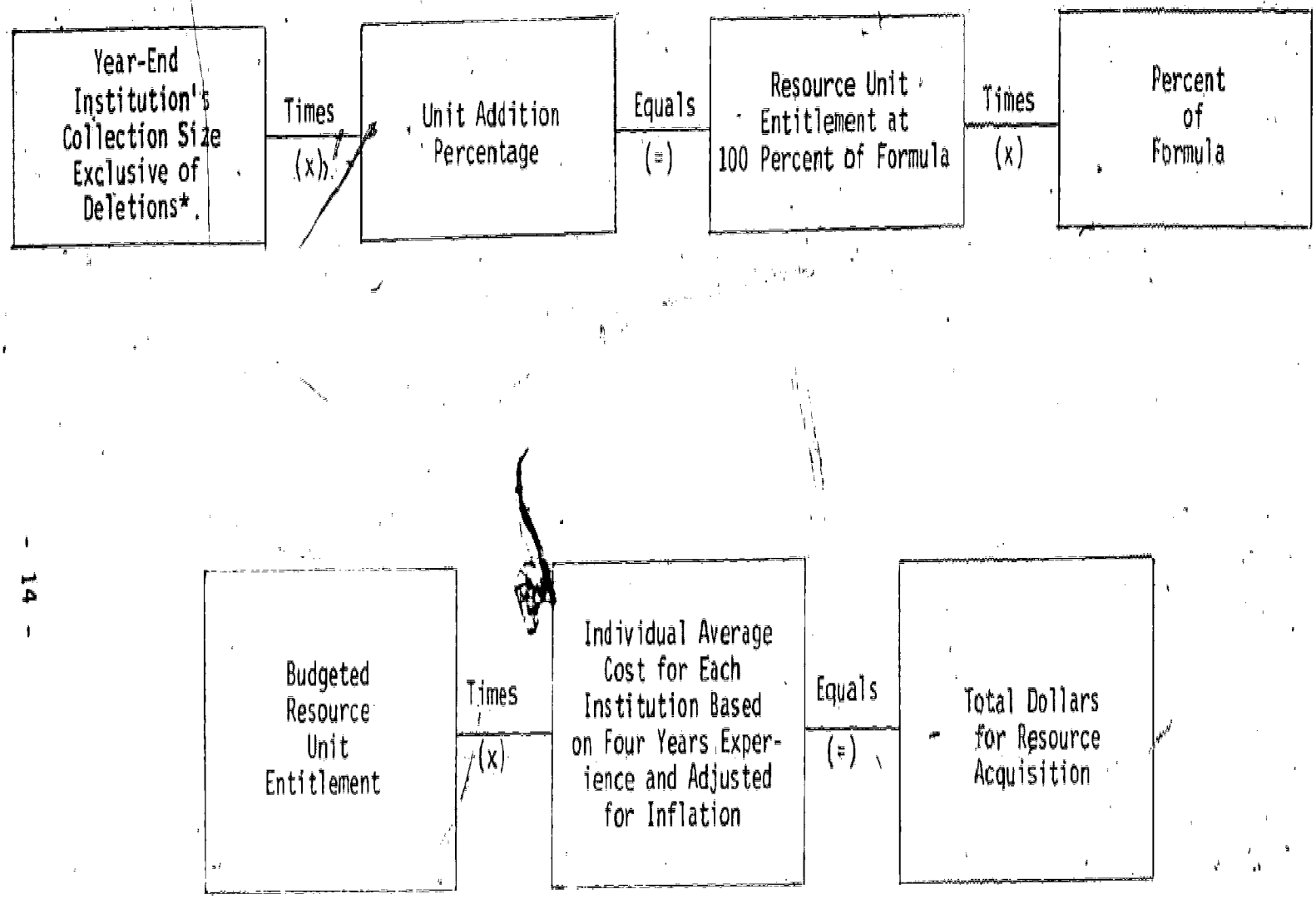


EXHIBIT I

Library Resources Element

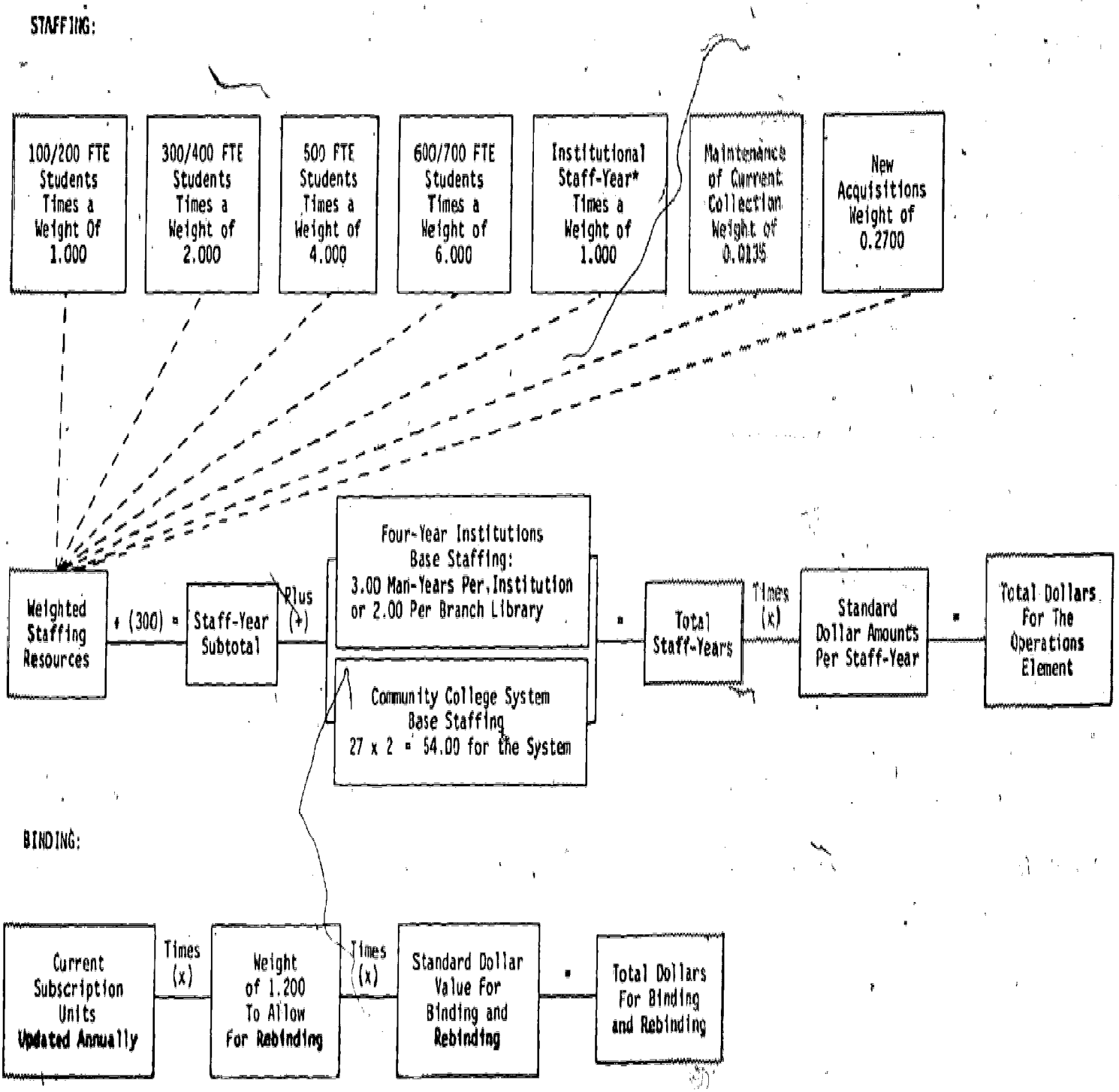


NOTE: Resource entitlement at 100 percent of formula and budgeted resource unit expenditure will be identical for a 100 percent of formula assumption.

* See Table III

EXHIBIT II

Library Operations Element



* This is exclusive of Program 10.0 (Grants and Contracts) staff-years.

assumption. Formula staff years are calculated and a standard dollar amount per staff year is applied to bring this portion of the formula to a total dollar amount, thereby encouraging flexibility in actual operating practice. The staff year amount is an intermediate calculation and is not intended to control actual staffing levels. The binding portion also assumes a standard dollar value. The number of current subsriptions assumes to require one binding per year with an added factor of .2 to allow for rebinding of currently bound materials. Exhibit II is unchanged from the Council's September, 1976 report and represents the process to be used in determining the necessary dollars for the operations portion of the formula. The overall intent of the operations portion is to calculate a dollar amount for each institution and the community college system for the activities covered by the formula, as in the case of staffing. It is not intended to limit institutional flexibility in the deployment of those funds.

Library Formula Responses

In our April presentation to the Council, we asked the community college system and each of the four-year institutions to comment on the preliminary recommendations. Appendix A contains copies of the community college system and the four year institutional responses to the proposed recommendations. As you will recall, the preliminary recommendations related only to the resource element. The community college system response expressed concern with the operations element recommendations related to the use of standard dollar values. Based on these concerns, we have included the discussion and rationale on standard dollar values adopted by the Council in September, 1976 as Appendix B. In reviewing the responses, there appears to be general acceptance of the proposed approach. The concerns raised fall into two categories: (1) Resources Element: The "collection size" base to

be used in the equations to determine resource entitlement; and (2) Operations Element: The use of standard dollar factors in the staffing category.

The issue that relates to the resources element concerns the use of a formula derived "volume count" as opposed to the use of actual collection size as proposed in our April, 1978 report. This point was raised by the State Board for Community College Education and Washington State University. Significantly, it is in the areas of community colleges and doctoral universities where most questions exist as to the appropriateness of existing measures. Neither sector has recognized national standards. A major portion of our current review in the resource element category was to determine if the standards previously used and those outlined in our 1976 report were both reasonable and appropriate.

During the staff's extensive review of budget formulas in 1975-76, the Council indicated that it was not their intention to determine what "must" be provided for an element or a program. It was the Council's position that formulas are intended to provide an equitable distribution of resources among schools and systems, to be relatively easy to understand and to serve as a form of shorthand for a number of detailed factors. The criteria applied by the Council was the guideline of reasonability. In other words, the formulas and the related measures and ratios should be reasonable, the standards used should have credibility, be understood by those who use them, and not be interpreted as specific spending plans.

In preparing the 1976 formula recommendations for library resources, the staff became convinced that the earlier approach of attempting to determine an optimum sized library through the use of numeric factors and subsequently attempting to convert that calculation into annual dollar

requirements was the root cause of the complexity of the old library formula. The staff, therefore, attempted to link the concept of numeric standards to an annual acquisition formula approach. It is extremely important to note that the formula factors included in the 1976 revisions were not meant to be used to determine an optimum sized library. The overall objective for the library resources element in the 1976 approach was to convert the "stock in hand" or inventory concept which related a set of standards to the current holdings of the four-year institutions and the community college system into a library resources element based on desirable fiscal year expenditures. For instance, the five percent "currency adjustment" as defined and used in the 1976 approach, had as its base only the opening day collection "standards" coupled with the program entitlement factors. No student or faculty factors came into play. The variable "replacement adjustment" related to actual collection size and had no relationship to any formula standards. The "standards" for students and faculty were involved only if there was a projected increase in either students or faculty in a particular biennium. The "new program adjustment" applied only to graduate programs, required a six-year phase-in and was a maximum, that is, it was not an automatic entitlement. In other words, the formula "standards" as they applied to the various categories that made up that 1976 approach were only incidental to the process and had only a marginal impact on the overall resource entitlement model. In essence, the 1976 approach represented a transition from hypothetical standards to fiscal year expenditure levels.

As a part of the current formula review process, the staff again attempted to determine if it was feasible to link numeric formula "standards" to acquisition assumptions. The evidence gained from the work with the

actual information from four-year institutions in the comparison states indicated that actual collection size was a more realiable indicator. In discussing this matter with the community college librarians and the State Board staff, the community college representatives requested a separate analysis of community college experience. The findings based on an extensive analysis of collection size and acquisition rates for 306 community colleges in the "pacesetter" states indicate that when the formula factors developed for community colleges are used to generate an optimum sized library collection, the resultant formula entitlement is totally unsupported in actual practice. In fact, not one community college library exceeds or even equals the formula "standards" included in the Council's 1976 approach and outlined on page one of Mr. Mundt's letter. What was found, however, were library collections and acquisition patterns similar to those experienced by Washington community colleges. By way of contrast the opposite is true with the four-year library "standards". That is, many of the four-year institutions in the comparison states exceed the four-year institutional "standards". What exists then are "standards" with varying relationships to reality in terms of actual institutional patterns. In addition, the "standards" are only recognized for a limited number of schools. It is clear, therefore, that this base is insufficient to serve as the criterion for recommendations which relate acquisition to holdings.

Modifications to the April, 1978 Staff Presentation

A significant outcome from the points raised during the review process is the proposed change to the collection size base. It is recommended that a collection size base exclusive of deletions in a particular year be used

as the base for calculating the annual acquisition rate. Although the proposed recommendation which relates acquisitions to current collection size is based on a declining percentage relationship as collection size grows, the inducement for deleting items from the collection is substantially reduced if year-end collection size (net of deletions) is used as the base for determining the acquisition rate. The collection size base for the beginning of the next fiscal year would include the deletions in order to maintain the integrity of the actual count. Pages 30 and 31 and Table III on Page 32 outline the Council's intentions to monitor the ongoing deletion activity at the two- and four-year institutions and provide a detailed description and examples as to how collection size is to be determined along with additional information on the reasons for the change.

With the above exception, the preliminary recommendations as presented at the April Council meeting remain unchanged. The resource recommendations are restated in the following section as part of the detailed discussion related to the resources element. The concluding section outlines the September, 1976 recommendations with amendments for the operations portion of the formula. As stated earlier, the operations section is virtually unchanged from that adopted by the Council in 1976.

III. Detailed Review of Recommendations: Resources

Library Resources Element

Acquisitions Entitlement	That resource unit acquisitions entitlement for the four-year institutions and the community college system be based on mathematically determined percentage relationships between actual collection size and annual acquisition rates.

The background and the research leading to this recommendation was reviewed in Section II. As was indicated in that discussion, attemping to operationalize a resource-based model made up of discrete numeric formula factors that apply equitably to institutions as diverse as those in Washington is not only difficult but yields less than satisfactory results. It was therefore concluded that a comparison-based approach which related actual collection size to annual acquisition patterns would represent a more meaningful and realistic alternative to the use of numeric hypothetical formula factors.

Community College Analysis and Methodology

The analysis of data for the two-year institutions in the "pacesetter" states of California, Texas, Florida, New York, Michigan, and Illinois was based on a comparison of acquisition rates to individual library collection size. The regression analysis included 306 observations with an observed equation of the parabola (curve) expressed as follows:

$$\text{Unit Addition Percentage} = 8.40 + \frac{7.96}{\text{Institutional Collection Size in Thousands}} \quad *$$

*The equation developed for the curvilinear regression line was $Y_c = a + (b/X)$ where Y_c is the computed or expected value of the dependent variable Y, and X is the independent variable. Y_c is further defined as "Percent Adds" and X is the number of volumes (collection size) expressed in millions. Normally the constant "a" is the "Percent Adds" value when the collection size equals zero. With this equation, however, as the collection size approaches zero, the "Percent Adds" value would approach infinity. The slope of the curvilinear regression line is "b".

To determine a curve that would represent 100 percent of formula, the relationship between the observed values for the six "pacesetter" states and the Washington institutions were analyzed. A weighted percentage relationship of .8027 was calculated for those libraries with collection sizes under 60,000. For the time period covered by the analysis, all Washington community colleges had collections of less than 60,000 units. The equation expressed above was adjusted by the .8027 factor to arrive at an equation that would be representative of an acquisitions entitlement factor at 100 percent of formula. The adjusted equation is:

$$\text{Unit Addition Percentage at 100 Percent of Formula} = 10.465 + \frac{9.913}{\text{System-wide Institutional Average Collection Size in Thousands}}$$

Four-Year Analysis and Methodology

In analyzing acquisition data as a percent of total collection size for the comparison four-year institutions in the states of California, Oregon, Minnesota, Michigan, Wisconsin, Indiana, and Illinois, regression analysis was also used. The analysis included over 140 observations with the observed equation of the parabola (curve) expressed as follows:

$$\text{Unit Addition Percentage} = \frac{1}{.1242 + (.03995)(\text{Collection Size in Millions})} *$$

*The equation developed for the curvilinear regression line was $Yc = \frac{1}{a + bX}$ where Y_c is the computed or expected value of the dependent variable Y, and X is the independent variable. Y_c is further defined as "Percent Adds" and X is the number of volumes (collection size) expressed in millions. The constant "a" is the "Percent Adds" value when the collection size equals zero. The slope of the curvilinear regression line is "b".

To determine a curve that would represent 100 percent of formula, the relationship between the observed values and the expected or predicted values were determined for the six four-year institutions. A weighted percentage relationship of .7833 was calculated based on the observed versus the predicted values. The equation expressed above was adjusted by the .7833 factor to arrive at an equation that would be representative of an acquisitions entitlement factor at 100 percent of formula. The adjusted equation is:

$$\text{Unit Addition Percentage at 100 Percent of Formula} = \frac{1}{.0969 + (.0312)\,(\text{Collection Size in Millions})}$$

Two- and Four-Year Graphic Illustrations

The illustration in Figure I on Page 13 (and the detailed charts in Appendix E) provide a graphic representation of the curves and related equations. The adjusted equations as recommended reflect approximately the 85th percentile of the observed values in both instances. In other words, one would expect 15 out of every 100 institutions in Washington's comparison groups to acquire resources at a higher rate than that allowed by the recommended equations at the proposed 100 percent level. This clearly meets the Council criterion of reasonability.

Transition Factor

Due to the different mathematical bases for the equations, the two equation-based lines never intersect to form a single curvilinear relationship. There is reason to believe, however, that a graduated adjustment is appropriate between 100,000 and 150,000 units. A transitional factor connecting the two equation-based lines is therefore recommended for the

range of 100,000 to 150,000 units. The equation for the transitional line indicates a one-tenth (0.1) decline for every 6,250 volumes added between 100,000 and 150,000 units.

Resource Unit Additions: Calculations and Comparisons

It is intended that the "100 percent of formula" equations presented above be reviewed after several years of experience. It is most likely that the declining percentage approach would continue to be supported by updated information although the equations might change. Exhibit III on Page 25 provides step-by-step calculations for determining acquisition rates and dollars at 100 percent of formula. A four-year institution example, as well as a comprehensive example for the community college system, are shown using their respective equations. The collection size and unit cost data are examples only and are not representative of either a four-year institution or the community college system in Washington.

Tables I and II on Pages 26 and 27 compare library resource units added for each of the four-year institutions and the community college system and includes their respective collection sizes and the new formula "Percent Adds" factors. The tables compare the budgeted units expected to be added in 1977-79 and actual units added for 1975-76 to the number of units that would have been added under the new formula.

In addition to soliciting responses to the formula itself, more up-to-date library statistical data was also requested from all the four-year institutions and the community college system. As the data becomes available, it will be passed along to the executive and legislative analysts as part of our ongoing responsibility in working with those individuals concerned with this issue.

EXHIBIT III

Calculation of Annual Resource Entitlement and Total Dollars
at 100 Percent of Formula
1978-79 Fiscal Year

Four-Year Institution (Example Calculation):

Collection Size:

Number of Volumes (July 1, 1978): 707,633 (.707633 million)

Average Unit Cost: $20.56*

Four-Year Equation (100 percent of formula):

$$\text{Unit Addition Percentage} = \frac{1}{.0969 + (.0312)\,(\text{Volumes in millions})}$$

$$= \frac{1}{.0969 + (.0312)\,(.707633)}$$

$$= \frac{1}{.0969 + .0221}$$

$$= \frac{1}{.1190}$$

Unit Addition Percentage = 8.40%

Unit Addition % Factor = $\frac{8.40\%}{100\%} = .0840$

Resource Unit Entitlement = (.0840) (707,633) = 59,441

Budgeted Resource Unit Entitlement = (59,441) (1.00) = 59,441

Total dollars for Resource Acquisition = (59,441) ($20.56) = $1,222,107

Community College System (Example Calculation):

Collection Size:

Average Number of Volumes (July 1, 1978): $\frac{1,053,000}{27} = 39,000\ (39.0)$

Average Unit Cost: $21.03*

Community College Equation (100 percent of formula):

$$\text{Unit Addition Percentage} = 10.465 + \left(\frac{9.913}{\text{Volumes in thousands}}\right)$$

$$= 10.465 + \left(\frac{9.913}{39}\right)$$

$$= 10.465 + .2542$$

Unit Addition Percentage = 10.72%

Unit Addition % Factor = $\frac{10.72\%}{100\%} = .1072$

Resource Unit Entitlement = (.1072) (1,053,000) = 112,882

Budgeted Resource Unit Entitlement = (112,882) (1.00) = 112,882

Total dollars for Resource Acquisition = (112,882) (21.03) = $2,373,908

* The historical base for these values would be updated based on a current dollar methodology. The 1978-79 value would include an inflationary adjustment for 1978-79 over the 1977-78 value.

TABLE I

Comparison of Budgeted
Units Added for the 1977-79 Biennium and
New Formula Resource Unit Entitlement

Institutions	Budgeted Resource Units*	Projected Collection Size July 1, 1978	New Formula: Percent Adds Factor	Unit Entitlement: New Formula	Percentage Relationship: Budgeted Versus New
UW	78,572	2,172,495	.0607	131,870	59.58%
WSU	61,132	1,384,652	.0714	98,864	61.83%
CWU	15,726	311,974	.0938	29,263	53.74%
EWU	15,550	329,912	.0933	30,781	50.95%
WWU	26,342	411,884	.0911	37,523	70.20%
TESC	10,505	163,060	.0981	15,996	65.67%
CC's	113,089**	1,260,743	.1068 ***	134,647	83.99%

* Biennial total divided by 2.

** Based on past expenditure patterns, 20 percent of the budgeted units were assumed to be for nonformula Audio Visual/Media purchases. (Total units funded for the biennium were 282,722.)

*** Based on a system-wide average of: $\frac{1,260,743}{27} = 46,694$

TABLE II

Comparison of 1975-76 Actual Units Added and Unit Entitlement with New Formula

Institutions	Units Added 1975-76	Collection Size July 1, 1976	Percent Adds Factor	Unit Entitlement: New Formula	Percentage Relationship: Actual Versus New
UW	87,306	2,046,030	.0622	127,263	68.60%
WSU	64,623	1,275,676	.0732	93,379	69.21%
CWU	12,281	292,198	.0943	27,554	44.57%
EWU	20,119	299,078	.0943	28,173	71.41%
WWU	28,379	381,326	.0919	35,044	80.98%
TESC	15,041	143,928	.0986	14,191	105.99%
CC's	58,362	925,843	.1075*	99,528	58.64%

Based on a system-wide average of: $\frac{925,843}{27}$ = 34,290.

Resource Unit Costs	That the per unit cost for resources be unique to each four-year institution and the community college system and be based on historical multi-year expenditure patterns for all resource units purchased, exclusive of audio-visual/media materials.

The Council's September, 1976 recommendations included a "standard dollar" concept for "other resource units" (books, microform materials, etc.). Since it is necessary to know how many units are to be acquired in any given year for staff entitlement determination, the use of a "standard dollar" value when compared to the institution's historical unit cost pattern made it difficult to assess how many units an institution would purchase and at what price. This problem coupled with the fact that our original recommendations allowed for separate and on-going funding of periodicals and serials based on historical patterns led us to a recommendation based on each institution's historical resource unit expenditure patterns.

Resource Unit Cost Calculations

The per unit cost values will be based on actual state and general local fund expenditures for purchased units added for fiscal years 1973-74, 1974-75, 1975-76, and 1976-77. The unit cost values for each institution will include a current dollar adjustment based on the Higher Education Price Index for Books and Periodicals. Inflationary adjustments based on final legislative action for the current biennium will be used to update the current dollar "adjusted" average for 1977-78 and 1978-79. Exhibit IV on Page 29 outlines the step-by-step procedure necessary for determining the cost per unit values for 1979-80 and 1980-81. The determination of historical costs for the community college system will include analysis related to their purchasing patterns in terms of paper materials both in terms of books and monographs.

EXHIBIT IV

Resource Unit Cost Calculations

Higher Education Price Index Values

1973	177.0
1974	195.3
1975	219.5
1976	251.8
1977	267.7

Inflationary Assumptions (Washington: 1977-79 Biennium)

1977-78	5.20%
1978-79	5.00%

Higher Education Price Index Percentage Increases

1977 vis-a-vis 1973	51.24%
1977 vis-a-vis 1974	37.07%
1977 vis-a-vis 1975	21.96%
1977 vis-a-vis 1976	6.31%

Historical per Unit Costs for Institution "A" with Current Dollar and Inflationary Adjustments

Fiscal Year	Actual Unit Cost		Current Dollar Adjustment		Adjusted Unit Cost
1973-74	$14.20	X	1.5124	=	$21.48
1974-75	15.96	X	1.3707	=	21.88
1975-76	17.04	X	1.2196	=	20.78
1976-77	18.00	X	1.0631	=	19.14
			Total		$83.28
			Average (Adjusted)		$20.82

Adjusted Values for the Current Biennium

1977-78	$20.82	X	1.0520	=	$21.90
1978-79	21.90	X	1.0500	=	23.00

NOTE: The cost per unit values for 1979-80 and 1980-81 would use the 1978-79 adjusted figure as the base and would include the inflationary assumptions as prescribed in OFM's Budget Guidelines.

Resource Unit Definition: Clarification

Our analysis over the past several months indicates that the definition of a "resource unit" needs to be clarified in an effort to improve the accuracy of actual collection size counts. We are proposing that future collection counts should include unbound periodicals (to be calculated at six volumes per lineal foot), as well as music scores which have been cataloged. (These two changes are consistent with recent definitional changes in the Higher Education General Information Survey (HEGIS) for college and university libraries.) In addition, a clarification of the phrase "otherwise prepared for use" is intended to cover those acquisitions which though they may not be fully cataloged and/or classified, are accessible and available to patrons through a printed list, card catalog, or similar means; it does not include a serial recording such as the government document classification system applied to documents which have not been cataloged. This change has met with the approval of the two- and four-year librarians.

Collection Size Calculations

Since the resource unit entitlement recommendation has as its basis actual library collection size, an accurate collection count and the attitude of the two- and four-year institutions regarding deletions from their collections are extremely important. The clarification to the resource unit definition discussed in the previous section was made to recognize the desirability of a continuing effort to, where appropriate, remove outdated materials. It is therefore recommended that the collection size base to be used in calculating annual resource unit entitlement be exclusive of deletions. To ensure that appropriate deletion programs are continued at the two- and four-year institutions, Council staff will annually monitor

these data for any deviations from past practices. Table III provides an example of how collection size is to be determined and includes a "subtotal" which would include all additions to the collection in a particular year and would be the basis for determining annual resource entitlement. "Year-end collection size", which is determined by subtracting deletions from additions, is used as the base for calculating staff entitlement for the "maintenance of current collection" category in the operations portion of the formula.

In the example shown in Table III, 1,110,000 and 1,200,000 would be the base numbers to be used in determining the annual resource unit entitlement. The year-end collection size numbers of 1,080,000 and 1,170,000 would be used to determine staff entitlement for the "Maintenance of Current Collection" category. The use of this approach will recognize efforts to remain current and offset any tendency to curtail those efforts for short term gain.

TABLE III

Year-End Collection Size

Description	Ensuing Biennium	
	First Year	Second Year
Collection Size as of July 1	1,000,000	1,080,000
Units added through state fund purchases[1]	100,000	110,000
Units added through research indirect cost recovery (dedicated) fund purchases[2]	2,000	2,000
Units added through gifts and grants[3]	8,000	8,000
SUBTOTAL: Resource Unit Entitlement Base	1,110,000	1,200,000
Deletions from the collection[3]	30,000	30,000
Year-end collection size	1,080,000	1,170,000

[1] Has to be updated with each percentage of formula change assumption.

[2] Research overhead funds specifically dedicated to the purchase of library resource units are expected to cover the cost of ordering, acquiring, and processing. This activity should be treated as a non-formula item and the number of resource units involved should be based on a combination of past experience and anticipated revenues available for this noncomparable item in any one biennium. Based on the available dollars and assumptions involved, the values may vary for each of the two years of the biennium.

[3] Based on an average of actual experience for the past two biennia (1973-74 - 1976-77 -- four years). The same value will be used for both years of the biennium.

IV. Detailed Review of Recommendations: Operations

Library Operations Element

Amendments — That the technical amendments to the September, 1976, recommendations be approved.

In terms of library operations, the Council adopted comprehensive revisions in September, 1976. As has been noted earlier, the main reason for the current review of the formula was concerns in the resources portion - not in the operations area. There were, however, a few operational areas where technical clarification was needed. The following is a list of the September, 1976, recommendations and the recommended technical amendments. The staff urges the adoption of the technical amendments but recommends no change in the basic approach to library operations as approved in 1976.

Existing Recommendations (Information Only)

(1) That all the library operations element categories be divided by 300 to determine staff years.

(2) That there be four "FTE student" categories (100/200, 300/400, 500 and 600/700) with weights of 1.000, 2.000, 4.000 and 6.000 as four of the library operations elements.

(3) That there be a "maintenance of current collection" category with a weight of 0.0135 as one of the library operation elements.

(4) That there be a "new acquisition" category with a weight of 0.270 as one of the library operations elements.

(5) That there be a "base staffing" entitlement allowing three (3) additional staff years per four-year institution or two (2) per branch library and 54 (2 x 27) additional staff years for the community college system.

(6) That the two- and four-year institutions use common budget request forms.

Amendments (For Council Action)

(7) That there be a ~~"total faculty and staff man-year"~~ an "institutional staff year" category with a weight of 1.000 as one of the library operations elements.

(8) That binding costs be a major sub-element with the overall library operations element. It is further recommended that the basis for determining binding costs be the current total subscription units times 1.200 (weighting factor to handle rebinding) times a standard dollar value per unit bound. It is further recommended that the standard dollar amount ~~have as its base the weighted average binding cost ($6.74) for the four-year institutions for 1974-75 and updated by the cost of living increases (12 and 5 percent) provided in 1975-76 and 1976-77~~ be determined by the Office of Financial Management after consultation with the state printer and adjusted for inflation for each year of the ensuing biennium.

(9) That a standard dollar amount per staff year be adopted that would include fringe benefits ~~(17 percent)~~ and operations costs. ~~(13 percent)~~ It is further recommended that this standard dollar amount have as its base the Higher Education Personnel Board classification for a library specialist I (step two) for the four-year institutions and the community college system.

With regard to recommendation number seven, the phrase "faculty and staff man-year" was redundant. Also, additional clarification was requested as to which staff should be included and the base year to be used, as well as an interpretation of how the staff year amount was to be determined.

It was determined that the staff year value should include all institutional employees except those in Program 10* (Grants and Contracts). The value will be a static number and will be the same for both years of the ensuing biennium. The number to be used is the budgeted staff year count for the second year of the current biennium.

The change in recommendation number eight evolved after several individuals suggested that the involvement of the state printer's office in the decision process with regards to the determination of a standard dollar value that would apply to the binding component would be appropriate.

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*The Grants and Contract Program staff-year amount is not to be included since calculations which relate to dedicated revenue from indirect cost recovery funds have already taken into account this potential group of users.

Appendix F provides an estimate of library rebinding charges developed by the Department of Printing in December, 1974. It is suggested that the $7.00 rate be used as the base for fiscal year 1974-75. (This rate compares closely with the weighted average for 1974-75 of $6.74.)

Table IV illustrates the past and forecasted increases in the consumer price index. If the index for 1974-75 (155.2) is used as the base for percentage adjustments for 1975-76, 1976-77, and 1977-78, the percentage values would be 7.1, 5.8, and 6.5 percent. The respective dollar amounts would be:

1974-75 : $7.00

1975-76 : $7.50

1976-77 : $7.94

1977-78 : $8.46

The amounts for subsequent years would be estimated based on forecasted inflation rates.

TABLE IV

Consumer Price Index
Fiscal Years 1968 - 1978

Fiscal Year	Index	Percent Change
1968	101.9	
1969	106.8	4.8
1970	113.1	5.9
1971	119.0	5.2
1972	123.2	3.5
1973	128.2	4.1
1974	139.7	9.0
1975	155.2	11.1
1976	166.2	7.1
1977	175.8	5.8
Estimated		
1978	187.3	6.5

Sources: Actual U.S. Department of Labor Estimates: Department of Revenue

With regards to recommendation number nine, the basis for the initial determination of the standard dollar amount per staff year was the 1975-77 biennial budget. The weighted average salary determined for 1974-75 was found to compare favorably to the second step ("C") of the Higher Education Personnel Board (HEPB) classification of a Library Specialist I. As outlined in the September, 1976 report, the addition of fringe benefits (17 percent) and operations cost (13 percent) to the 1976-77 salary amount ($10,452) for a Library Specialist I (Step "G") would produce a standard dollar value of $13,588 for the 1976-77 fiscal year. Objections were raised, however, concerning the rigidity caused by the use of actual percentages.

In terms of fringe benefits, the improved health benefit package adopted by the 1977 legislature and increases in social security rates could mean as much as a four percent increase in the fringe benefit percentage relationship for an average salary of $11,000. Although the 17 percent was appropriate in 1974-75, an analysis of current fringe benefit relationships for the college and university libraries would probably yield an overall percentage relationship closer to 19 percent.

In terms of operations costs, the 1976 approach set the operations costs value at 13 percent of the standard dollar value for salaries. It was pointed out during the executive and legislature review of the revised formula that salaries may or may not rise at the same rate as other goods and services; therefore, it was felt that an operations cost amount based on a set percentage relationship related to a hypothetical dollar value was a less than desirable long-range approach. It is suggested that the 1974-75 weighted operations costs per staff year of $1,131 as used in the September, 1976 report be used as the base. Annual increases would be based

on increases in the consumer price index as shown in Table IV. The percentage increases would be the same as those outlined in the discussion regarding the binding standard dollar values. The respective dollar amounts would be:

1974-75	:	$1,131
1975-76	:	$1,211
1976-77	:	$1,281
1977-78	:	$1,364

Overall then, it is suggested that the fringe benefit and operations cost amounts should be continually updated by the Office of Financial Management based on known and anticipated federal and state changes in fringe benefits and adjusted for inflation in the operations cost area.

Calculations: Library Resource Element

Exhibit II in Section II provides the framework for the Library Operations Element. Exhibit V provides the detailed calculations for determining total dollars for the Operations Element.

Community College Concerns

The State Board for Community College Education expressed concern with the standard dollar concept in 1976. Mr. Mundt's May 3, 1978, letter included in Appendix A reiterated this concern.

In the determination of staffing factors as they relate to the operations portion of the formula, a staffing mix of 22 percent professional librarians and 78 percent other staff was assumed based on our analysis of actual institutional patterns. (The Association for College and Research Librarians suggests a standard of 25 to 35 percent professional librarians.) The community college staff makeup in 1975-76 was approximately 35 percent professional. As we pointed out on Page 30 of the September, 1976 report:

EXHIBIT V

Library Operations Element Calculations
1976 - 77

Staffing and Operations Costs

Description	Numbers	X	Weightings	=	Weighted Values
FTE Students:					
100/200	12,262		1.0000		12,262
300/400	9,749		2.0000		19,498
500	3,751		4.0000		15,004
600+	1,584		6.0000		9,504
Staff Years	8,076		1.0000		8,076
Maintenance of Current Collection	2,443,659		0.0135		32,989
New Acquisitions	99,156		0.2700		26,772
			Weighted Total: Staffing Resources		124,105
			(Divided by) Divisor of 300		+300
			(Equals) Staff-Year Subtotal (=)		414
			(Add) Base Staffing (+)		34
			(Sum) Total Staff Years (=)		448
			(Times) Standard Dollar Amount (x)		13,588
			(Equals) Total Dollars for Staffing and Operations		$6,087,424

Binding/Rebinding

Number of Periodicals		Weighting	=	Weighted Value	X	Standard Dollar Values	=		
29,159	x	1.2	=	34,991	x	$7.94	=	Total Dollars for Binding and Rebinding	277,829
								Total Dollars for Operations:	$6,365,253

"Council staff feels, however, that the 22 percent relationship is more appropriate since the community colleges already have a high percentage of professional librarians and consequently, as additional support staff are added, the percentage relationship will more closely equal the relationship already experienced in the four-year institutions. Also, since the new staff that are being hired will be at the support level, the proposed standard staff year salary should adequately reflect the needs of the community colleges."

In terms of the standard dollar concept, the discussion paper entitled: The Use of Standard Dollar Factors in Formulas for Supporting Programs, included in Appendix B points out that since historical data would be adjusted to reflect the institutional percentages against the new formulas, there would be no necessary disadvantage to an institution unless the legislature based its funding levels on a lower percentage of formula than had been experienced in the past. Since the actual staffing and funding levels are currently well below 100 percent of the formula values, the use of standard dollar factors merely serve to adjust the institutional position vis-a-vis 100 percent of formula.

Data Tables

Since no substantive changes are recommended, the data tables and analysis included in the September, 1976 report have been included as Appendix G. As was noted earlier, more up-to-date library statistical data was also requested from all the four-year institutions and the community college system. As data becomes available, it will be passed along to the executive and legislative analysts as part of our ongoing responsibility in working with those individuals concerned with this issue.

APPENDIX A

Responses to the Council's Library Formula Recommendations:

University of Washington
Washington State University
Central Washington University
Eastern Washington University
Western Washington University
Community College System

UNIVERSITY OF WASHINGTON LIBRARIES
SEATTLE, WASHINGTON 98195

June 5, 1978

Mr. Norm Fischer
Senior Analyst
Council for Postsecondary Education
908 East 5th Avenue
Olympia, Washington 98504

Dear Norm:

The proposed formula based on collection size is workable and provides satisfactory results for the University of Washington. We regret abandoning program needs as the basic formula factor and also regret the emphasis on counting the collection, an activity which has been regarded with suspicion in the past. Nevertheless we support the new formula approach.

The alternative formula, based on ACRL standards updated by the 5-year currency adjustment factor, provides equally satisfactory results, is easier to compute since it omits the collection count, is based on objective, outside factors, and is preferable in that it reflects the library's program needs. We support this approach as the more attractive alternative. While a collection count is required for the operations formula, in either case, the resulting entitlement is so small that differences in counting methods are relatively unimportant.

Both formulas, whether based on collection size or the ACRL formula inventory, utilize a curve calculated on observed acquisitions rates in comparable libraries. The underlying assumption is that all libraries of the same size have similar needs and should acquire the same number of volumes annually. In reality there are many variable factors affecting the need to purchase materials; location in relation to other libraries, depth and breadth of programs, decentralization, whether part of a State system, responsibility to non-academic clientele, etc. In addition, the statistics on which the curves are based are not uniform. HEGIS survey data reflect the statistics libraries can most easily and conveniently gather, whether or not they match HEGIS definitions. Nevertheless, use of these observed acquisitions rates is an acceptable formula approach provided we acknowledge these variations, and hence the fallability of the factor.

In short, the University of Washington supports the current formula proposal to use acquisitions rates in comparable libraries as the method of determining formula entitlement, and finds either actual collection size or the adjusted formula inventory acceptable as the basic formula factor.

Sincerely yours,

Merle N. Boylan
Director of Libraries

MNB:CMC:pr

cc: Craig Purkey
Bob Thompson
University Budget Committee

WASHINGTON STATE UNIVERSITY
PULLMAN, WASHINGTON 99163

OFFICE OF THE PRESIDENT

May 9, 1978

Mr. Denis Curry
Deputy Coordinator for Finance and
Information Systems
Council for Postsecondary Education
908 Fifth Avenue
Olympia, Washington 98504

Dear Denis:

This letter is in reply to the letter of April 21, 1978, from the Finance and Information Systems of CPE. It is directed only to the Library Formula, and you will be receiving from Warren Bishop a reply on the Building Maintenance Formula.

Washington State University recognizes that changes to the basic Library acquisition formula methodology are essential, if the formula is to be more responsive to institutional resource requirements. The concept of basing the acquisition level upon units required to maintain a "current collection" is acceptable in principle. However, from the viewpoint of the University, such an approach appears inappropriate in practice for two important reasons.

First, this approach fails to take into consideration the essential program needs of institutions and their dynamic character. Library resource requirements obviously change as academic programs are added to the curriculum or eliminated from it, and as programs grow or contract.

Second, the funding level of the Washington State University's library resources is much lower than that of all of the other four-year State institutions. This condition has evolved over several biennia. It has resulted primarily from the fact that the Library's shelf and storage space was extremely limited until late last spring when the new Science and Engineering Library was opened. It does not reflect a low institutional

priority for the Library as some have suggested; the Library has always been regarded as an indispensable component of the University's academic and research programs.

The proposed CPE formula, based on current collection size, would perpetuate the University's present intolerably low library resource level, penalizing the institution for following the principle that resources acquired before they could be made available to users was an inefficient utilization of State resources. According to preliminary CPE staff calculations, the difference for WSU between the acquisitions generating power of a current collection approach and a national standards model is 19,259 units/year at 100 per cent of formula. Even at a reduced formula level, the relative impact of the current collections formula approach would be significant, especially when compared to its effect on other four-year institutions which would actually receive more resources under such a formula than on one constructed on model collection size.

The University recognizes that equity adjustments can be requested as a non-formula item. However, without a recognized model standard against which all State four-year institutions can be compared and institutional equity requests can be justified, the probabilities of receiving equity adjustments must be recognized as less than favorable.

For these reasons, Washington State University urges the staff of the Council for Postsecondary Education to amend its library formula recommendation by basing the acquisition entitlement on a model standard rather than on the actual collection size. This would provide equitable formula-treatment for all institutions, and it would permit future

comparative analyses of library resources to recognize essential institutional program elements.

Sincerely yours,

Glenn Terrell
President

GT:jt

cc: Bill Chance
Bob Carr

CENTRAL WASHINGTON UNIVERSITY
Ellensburg, Washington 98926 Affirmative Action/Equal Employment Opportunity/Title IX

May 8, 1978

Mr. Denis Curry
Deputy Coordinator
Finance and Information Systems
Council for Postsecondary Education
908 East 5th Avenue
Olympia, WA 98504

Dear Mr. Curry:

We have reviewed the document entitled, "Preliminary Recommendations: Library Formula Resource Element" and believe that it represents an improvement over previous proposals. Specifically, our Dean of Library Services believes "an entitlement of resources based upon collection size which varies inversely is appropriate and fair to all libraries, and the use of experienced unit costs is better than the standard cost used before."

Our Dean of Library Services also recommends "support for the resources element and a bindery element which is treated in another report." He still has "reservations on the staffing and operations element which encourages branch libraries and uses a standard dollar approach to salaries."

Dean Waddle also believes that, in lieu of a standard salary, we "should try for a change to experienced personnel costs at each institution."

I hope these comments will be of use to you.

Sincerely,

Edward J. Harrington
Vice President for Academic Affairs

jm

cc: Dr. Brooks
Dr. Waddle

EASTERN WASHINGTON UNIVERSITY

The Library

Office of the University Librarian

Cheney, Washington 99004
509-359-2264

May 30, 1978

Mr. Norman Fischer
Senior Analyst
Council for Postsecondary Education
908 E. 5th Avenue
Olympia, Washington 98504

Dear Norman:

I have finally taken time to review your efforts with the Library Formula revision, and wish to offer the following observations:

1. It is clear that your proposed revision is less complicated then the existing formula and, therefore, is an improvement.

2. Substantial "field testing" should be carried out before the change to your proposal is made.

3. It is difficult to know if Eastern would be helped or hurt by your formula. Too much depends on the "percentages of model" to be allowed. Assuming the same percentages as were allowed for 1977/79 budget, this library would definitely benefit in resources, but would suffer in staffing. The overall result would probably produce a small gain in dollars, especially if standard dollar values were chosen for resources, staffing and binding.

4. I would anticipate substantial opposition if your proposal results in mass shifts of dollars, or percentages of the total dollars to the library program, from one institution, or group of institutions, to others. Only substantial testing will demonstrate the likelihood of such a situation arising when the new formula is adopted.

5. I note that the community colleges are represented in the curvilinear expression by factors which are drawn from six "pace-setter" states while the four-year institutions rely on the experience of the seven states with which Washington has traditionally compared itself. Only three of the pace-setter states are represented in the seven states and, therefore, a disturbing, potentially non-comparable element is introduced.

6. The use of standard dollar amounts, hinted at in 3 above, would generally be favored by EWU. While I must concede a certain selfishness in this attitude, I suspect we would all benefit from an enhanced credibility if standard costs were used. The differences in costs, especially for materials, may be more a matter of reporting than of real differences. In staffing, once locked in to a low cost mix, it is difficult to alter the pattern.

To sum up, based on very limited experience with your proposal, I have no objections, other than those outlined. You appear to have produced a workable solution and I urge you to proceed with the testing of it.

Sincerely,

Charles H. Baumann
University Librarian

cc: Dr. Marshall
Dr. Sherman
Mrs. Tracy
Mr. Whiteside
ICCL Members

WESTERN WASHINGTON UNIVERSITY
Bellingham, Washington 98225 • [206] 676-3000

24 May 1978

Denis J. Curry
Deputy Coordinator for Finance
and Information Systems
Council for Postsecondary Education
908 Fifth Avenue
Olympia, Washington 98504

Dear Denis:

The Library staff have been working with the proposed library formula revision, and we believe it is demonstrably better than the previous one. Our response must fall short of endorsement until such time as the revision has been tested, but there are some elements that we expect to be productive of better practices and better information for all agencies involved.

We believe, for instance, that to use collection size as a base for calculations is much more realistic for all institutions than the former student/faculty/program configuration; library resources are not easily equated with programs, nor are numbers of students and faculty truly indicative of collection needs. We like using experienced costs averaged over four years--the resulting calculations can be readily justified. Finally, it should be noted that the staffing formula must be pegged at about 75 percent to produce the same number of positions that the old formula produced at 55 to 60 percent.

We Believe the work that has gone into this revision has produced positive results, and we support the revision subject to its use over a biennium.

Sincerely,

James L. Talbot
Vice President for Academic
Affairs and Provost

JLT:rh

STATE OF WASHINGTON
Dixy Lee Ray
Governor

STATE BOARD FOR COMMUNITY COLLEGE EDUCATION
319 Seventh Avenue, Olympia, Washington 98504
John C. Mundt, Director

Ref.: 78-35-47

May 3, 1978

Mr. C. G. "Gail" Norris
Executive Coordinator
Council for Postsecondary Education
908 East Fifth
Olympia, Washington 98504

Dear Mr. Norris:

The inequitable treatment of community colleges in the application of higher education budget formulas has long been one of our greatest concerns. For this reason, we are pleased that the Council staff is continuing the review of formula procedures and we hope that this will provide a way to remedy some of the current disparities. We therefore welcome this opportunity to comment on proposed revisions.

At the last meeting of the Council for Postsecondary Education, materials were distributed containing preliminary recommendations on the higher education library and physical plant formulas. Having now reviewed these materials in detail, we find a number of difficulties with the recommendations that have been proposed.

Our primary concerns center on the library formula. Through extensive work of the Council staff and representatives from the community colleges and four-year institutions, formulas were developed for defining the appropriate size of library collections. Procedures included the assumption of a basic collection, and to this were added collection increments related to numbers of students, faculty and programs offered. The format was as follows:

	Community Colleges	Four-year Colleges and Universities
Basic or opening day collection	30,500	90,000
Allowance per FTE student	15	15
Allowance per FTE faculty	100	100
Allowance per vocational program field	175	--
Allowance per Masters field when no Doctorate is offered in field	--	6,000
Allowance per Masters field when Doctorate is offered in field	--	3,000
Allowance per Doctoral field	--	25,000
Allowance per $15 million for organized research	--	1,000

Using these standards (adjusted for an annual currency factor), it is possible to compute an appropriate library requirement for each college or university against which to measure current collection size. These formulas have been mutually agreed upon by all of the institutions involved.

The preliminary library recommendations now propose that these formula procedures be eliminated from the computation of resource needs. Instead, it is proposed that an institution's actual collection units be substituted for the formula collection units. The impact that this change would have on community colleges becomes apparent when the relationship between actual and formula collections is examined. The figures are as follows:

	1978-79 Formula Collection Units	Projected Collection Units 7/1/78	Actual as a Percent of Formula
UW	2,686,763	2,172,495	80.9
WSU	1,893,551	1,384,652	73.1
CWU	322,350	311,974	96.8
EWU	364,095	329,912	90.6
WWU	420,396	411,884	98.0
TESC	166,268	163,060	98.1
Community Colleges	2,928,465	1,260,743	43.1

From this, it can be seen that the actual collections at the four-year institutions range from 73 percent to 98 percent of the collection need defined by formula; whereas, the community colleges actual collections are only 43 percent of the formula requirement.

The recommended procedure calls for collections resources to be based upon a percentage of actual collections. This percentage is based upon a study of relationships between collection units purchased and total collection size. The percentage factors for new unit entitlement are as follows:

	Percent
UW	.0607
WSU	.0714
CWU	.0938
EWU	.0933
WWC	.0911
TESC	.0981
Community Colleges	.1068

Multiplying these percentages by the actual collection size then produces the formula entitlement under the newly recommended procedures. This results in the community colleges' factor of .1068 being applied against an inventory that stands at 43 percent of formula with the factors for the four-year institutions being applied to inventories at much higher percentages of formula.

This has the effect of perpetuating the status quo with respect to current collection size. Those institutions which have large collections receive favorable treatment and those which are undersupplied are penalized. We are concerned that the formula for determining collection size worked out jointly by the community colleges and the four-year institutions is suddenly being abandoned.

When changes to the library formula were discussed with community college librarians, the percentage for calculating resource needs was shown applied against the formula collections inventory, not the actual inventory. At that time, however, the currency percentage for the community colleges was based upon the combined collections inventory of our 27 libraries rather than a systemwide average. This made the currency factor 5.31 percent instead of the 10.68 percent now shown in the library recommendations. Our librarians and staff pointed out the impropriety of using the total system collections to establish the currency percentage, and this has now been remedied. The concurrent elimination of the formula inventory in favor of actual collections, however, seems to have been designed simply to reduce the resource entitlement for community colleges.

Consolidation of community college library data into systemwide totals is a convenience in reviewing formula recommendations. However, it tends to obscure the fact that our totals are distributable over 27 libraries. The recommended resource entitlement of 134,647 units per year averages only 4,986 units per library in contrast with recommended formula entitlements of 15,996 at TESC, 29,263 units at CWU, 30,781 units at EWU and 37,523 units at WWU. In addition, the community colleges which up to now have had collections equal to only 43 percent of formula collections are shown with current budgeted resource units equal to 83.99 percent of the proposed formula entitlement, whereas the four-year institutions average 60 percent for the same comparison. This makes community colleges appear to be funded currently at a more favorable rate than four-year institutions, when exactly the reverse is the case.

If the formula collections procedure is retained and the new currency percentages are utilized, the comparison with current budget funding produces a more logical relationship than the proposal to relate to actual collections as a measure of resource needs. In addition, such a procedure takes into account the deficient starting position of the community colleges. The results would be as follows:

	Formula Inventory	Currency Percentage	Units to be Added	Currently Budgeted Resource Units	Budgeted Units as a % of Units Added
UW	2,686,763	.0607	163,086	78,572	48.18
WSU	1,893,551	.0714	135,199	61,132	45.22
CWU	322,350	.0938	30,236	15,726	52.04
EWU	364,095	.0933	33,970	15,550	45.78
WWU	420,396	.0911	38,298	26,342	68.78
TESC	166,268	.0981	16,310	10,505	64.41
Comm. Colleges	2,928,465	.1068	312,760	142,361	45.52

If all institutions were funded at a common percentage of formula under this arrangement, the results would be relatively close to current budget provisions. We believe that a revision of this type is needed to bring equity to the resources side of the library formula.

Our second major concern with the recommended formula procedures falls in the library staffing area. This has to do with the proposed use of standard dollar values for pricing library personnel. Because we have 27 small libraries rather than the one large one at four-year institutions, the make-up of our staff consists of a higher percentage of professionals. As a consequence, our average library salary is approximately $2,000 higher per staff year than that of the four-year institutions. Using a single rate to price all library staff results in underfunding of community college personnel. We feel this should be corrected by a formula that would translate total library staffing entitlements into professional and classified staff components, and that these should then be priced independently through the use of two standard dollar values rather than one.

With respect to the proposed plant formula procedures, we feel that the effectiveness of solving the disparate maintenance needs defined by the consultant's study through transfer of major roof repair to the capital area will depend upon the recognition of adequate funding for these needs in that area. If this can be assured, the current differential maintenance needs will be adjusted. Without this, however, we would prefer an adjustment of the maintenance factors such as we have suggested in an earlier communication to Denis Curry.

We would strongly urge that our suggestions on the library formula be made a part of the recommended procedures that are presented for final Council review.

Sincerely,

John C. Mundt
Director

JCM:mm

cc: Community College Presidents
Business Officers
Librarians
Jim Martin, House Appropriations Committee
Mark McLaughlin, Senate Ways and Means Committee
Gary Ogden, OFM
Bob Benson, OFM
Mike Roberts, OFM

APPENDIX B

The Use of Standard Dollar Factors in Formulas for Supporting Programs

THE USE OF STANDARD DOLLAR FACTORS IN FORMULAS FOR SUPPORTING PROGRAMS

Each of the supporting programs covered by budget formulas, Plant Operation and Maintenance, Libraries and Student Services contain several major components which are addressed by different budget formulas. For example, in Plant Operation and Maintenance, building maintenance comparisons are based on an amount calculated by applying factors to the replacement cost of facilities as adjusted by the type of construction while janitorial services are related to square feet of space.

In certain components, such as building maintenance, utilities maintenance and in the four-year institution student services formula, the prime comparison has been in terms of dollar requirements. In other areas, such as janitorial services, grounds maintenance and library operations, the primary point of comparison has been the number of personnel (e.g. one janitor per 20,000 square feet). The personnel comparison has then been converted into dollar requirements by the application of dollar amounts which vary among the institutions based on their past experience. In other words, if Institution A expended $12,000 per "staff year" and Institution B expended $10,000 per "staff year", Institution A would continue to receive a 20 percent higher funding level for the same amount of staff. The following example taken from the staff discussion on plant operation and maintenance illustrates how the variable cost factors work in the area of operations costs.

Janitorial Operations Cost Calculation
Using Variable Formula Factor

	Institution A	Institution B
Variable Formula Factor	$500 per staff year	$650 per staff year
Number of Staff Years	100	100
Entitlement at 100 Percent	$50,000	$65,000
Percent of Formula Requested	60%	60%
Budget Request	$30,000	$39,000

In an audit of the plant formula, the Legislative Budget Committee pointed out that when each institution requests a different amount per variable unit, budgetary comparisons are confusing. The above example is a good illustration of the unclear picture drawn by the current practice: the total dollar amount requested by each institution varies considerably, yet each request is reflected at the same percentage of formula.

The Legislative Budget Committee report suggests that since formula percentages are used to measure support and expenditure levels, that the percent of formula should be dependent upon the dollar total of a program rather than a staff year entitlement of a particular formula. Therefore, the Legislative Budget Committee audit recommended that standard cost factors be used by all institutions. The following indicates the impact of standard cost factors on the above example.

Janitorial Operations Cost Calculation
Using Standard Cost Factor

	Institution A	Institution B
Standard Cost Factor	$600 per staff year	$600 per staff year
Number of Staff Years	100	100
Entitlement at 100 percent	$60,000	$60,000
Percent of Formula	50%	65%
Budget Request	$30,000	$39,000

In preparing its recommendations for revision of budget formulas, the staff has been guided by the objectives and criteria reviewed with the Council in December, 1975. One of those objectives has been to incorporate those suggestions made by the Legislative Budget Committee in its audits wherever feasible. It was our conclusion that insofar as possible in the support program areas (as apposed to instruction where faculty salaries are a major item of separate legislative interest) standard dollar values should be used for all formula components.* Further, in order to support the objective of institutional flexibility in the use of funds within the areas covered by the formulas, we have concluded that the point of comparison should be in terms of the total dollar amounts for the programs as opposed to the component parts. It was the staff opinion that the use of standard dollar factors would promote such flexibility since it is then possible for an institution to decide to invest in more or less staff, equipment and materials, or contract for services if they chose and still adhere to the total dollar amounts expressed in the formula calculations.

When the staff reports were presented to the advisory steering committee, several members took exception to the use of standard dollar factors in the area of salaries and wages. No objection was raised to the use of standard factors in operations costs. The staff agreed to present to the Council the different points of view on this subject in order that a determination could be made.

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* It was determined after executive and legislative review of the 1976 revisions that the number of resources to be purchased in the library area was a major item of interest and needed to be highlighted along with actual cost patterns for each four-year institution and the community college system.

One of the arguments against using standard dollar factors to convert personnel amounts into dollar comparisons was that the institution which paid a higher amount than the standard dollar factor would be unable to fund the positions which were approved. For example, Institution A and Institution B might each receive 50 janitorial positions at 100 percent of formula. The Legislature has funded 60 percent of formula in the past (30 for each school). Institution A's average salary is $12,000 and would require $360,000 (30 x 12,000) to maintain existing staff. If the standard factor were $11,000, Institution B (whose average is $10,000) would receive more than it needed and Institution A would have insufficient funds.

It is the staff position that the formula components do not represent a strict spending plan and on the contrary should allow institutional flexibility in the use of resources within programs. Since the actual staffing and funding levels are currently well below 100 percent of the formula values, the use of standard dollar factors merely serve to adjust the institutional position vis-a-vis 100 percent of formula. It is the staff's opinion that since historical data would be adjusted to reflect the institutional percentages against the new formulas, there would be no disadvantage to an institution unless the Legislature based its funding levels on a lower percentage of formula than had been experienced in the past.

To refer to the earlier example, Institution A (with the higher average salary) would exhibit a higher percent of formula than Institution B, which would accurately reflect differences in expenditure levels for the particular formula component. (It should be noted that in plant operation and maintenance that the difference might be offset by several of the other components--many of which are now based on standard dollar factors.)

Another argument which was advanced against the use of standard dollar factors in the area of salaries was that the salaries paid on the various campuses are often beyond the control of the institutions since a large proportion of the personnel are covered by the salary plan adopted by the Higher Education Personnel Board. Our analysis has indicated that all institutions have the opportunity to determine the mix of personnel in varying degrees between exempt, classified and student employees. For example, Central Washington State College has chosen to staff its libraries with 25 percent professional staff, while at Eastern Washington State College, approximately 17 percent of total staff are professional librarians. In addition, the Higher Education Personnel Board does not exercise strict position control, but rather determines the appropriateness of position classification on a post-audit basis. This flexibility should be maintained and encouraged, but at the same time an institution which chooses to hire individuals at higher average salaries should not be rewarded in comparison with the institution which chooses to hire individuals at lower average salaries or varies its mix of personnel to result in a lower than average salary.

Another argument advanced against the staff proposal was the likelihood that salary and wage expenditures would be monitored through the state's central accounting system and that if institutions spend more or less than the formula value, an exception report would be produced which would be difficult for institutions to explain. It should be noted, however, that in several formula components, such as building maintenance, the comparison is currently based on dollars and the institution is free to structure its expenditure plan in a manner which it deem appropriate. Therefore, if the formula for areas such as janitorial service is tied to total dollars, the institution can similarly structure its plan to avoid the occurrence of such a situation

The formulas should produce equivalent dollars for equivalent work to be performed, taking into account all of the relevant formula factors. It is, therefore, concluded that all of the sub-formulas in the support program areas which currently key to staffing comparisons should be converted to a dollar comparison through the use of standard dollar values determined from the Higher Education Personnel Board state plan and adjusted as that plan is adjusted.

APPENDIX C

Library Resource Unit Definition

LIBRARY RESOURCES ELEMENT

Unit of Library Resources: (1) One volume as defined by and reported to the U. S. Office of Education in the annual Higher Education General Information Survey*, or (2) one reel of microfilm or micro-cards or microfiche as reported on the same survey.

> *For reporting purposes, a volume is a physical unit of any printed, typewritten, handwritten, mimeographed, or processed work contained in one binding or portfolio, hardbound or paperbound, which has been classified, cataloged and/or otherwise prepared for use. Include bound periodical volumes. Include government documents that have been classified and cataloged, counting as a volume such material as is contained in one binding or portfolio. Include unbound periodicals (to be calculated at six volumes per lineal foot), as well as music scores which have been cataloged.

The term "otherwise prepared for use" includes accessions which have not yet been cataloged but does not include a serial recording such as the government document classification system applied to documents which have not been accessed or catalogued. (This is intended to cover those acquisitions which though they may not be fully cataloged and/or classified, are accessible and available to patrons through a printed list, card catalog, or similar means; it does not include a serial recording such as the government document classification system applied to documents which have not been cataloged. The listing of specific inclusions or exclusions from the comparable area count is as follows:

Exclude:

(1) Government documents which do not meet the definition of a volume as outlined above;

(2) College and university catalogs;

(3) Fragmentary or loose map collections;

(4) Pamphlets, clippings, unbound newspapers, loose music scores, paintings, prints, phonograph records, and tape recordings;

(5) Educational curricular materials, such as school texts, curriculum guides, kits and laboratoriali, film strips, records, units of study, circulating periodical collections for student teachers, book jackets, pictures, etc., which are not cataloged or accessed or otherwide meet the definition of a volume;

(6) Telephone books, trade catalogs and other ephemeral materials.

Include:

(1) Prints or plates in portfolio;

(2) Each copy of theses which are retained;

(3) Material which meets the definition of a volume which are housed in an archives and educational reference material or audio-visual reference books which meet the definition of a volume but which happen to be housed in a curricular lab or an AV section;

(4) Juvenile books if they are cataloged or accessed;

(5) Bound volumes of newspapers.

APPENDIX D

Resource Formula Standards

COMMUNITY COLLEGE RESOURCE FORMULA STANDARDS

Category	Original Formula	1976 Council Revisions
Basic or Opening Day Collection (System Total)	20,000 x 27 (540,000)	30,500 x 27 (823,500)
FTE Students: Academic	15	15
Vocational	7.5	15
FTE Faculty	100	100
Vocational Program Fields	120	175

FOUR-YEAR COLLEGE AND UNIVERSITY RESOURCE FORMULA STANDARDS

Category	Original Formula	Defacto Currency Adjustment*	ACRL	1976 Council Revisions
Basic or Opening Day Collection	85,000**	103,910**	85,000	90,000**
Allowance Per FTE Faculty	100	122	100	100
Allowance Per FTE Student	15	19	15	15
Allowance Per Masters Field When No Doctorate is Offered in Field	6,100	7,456	6,000	6,000
Allowance Per Masters Field When Doctorate is Offered in Field	3,050	3,729	3,000	3,000
Allowance Per Doctoral Field	24,500	29,950	25,000	25,000
Allowance Per Baccalaureate Field	**	**	350	**
Allowance Per $15 Million for Organized Research	0	0	0	1,000

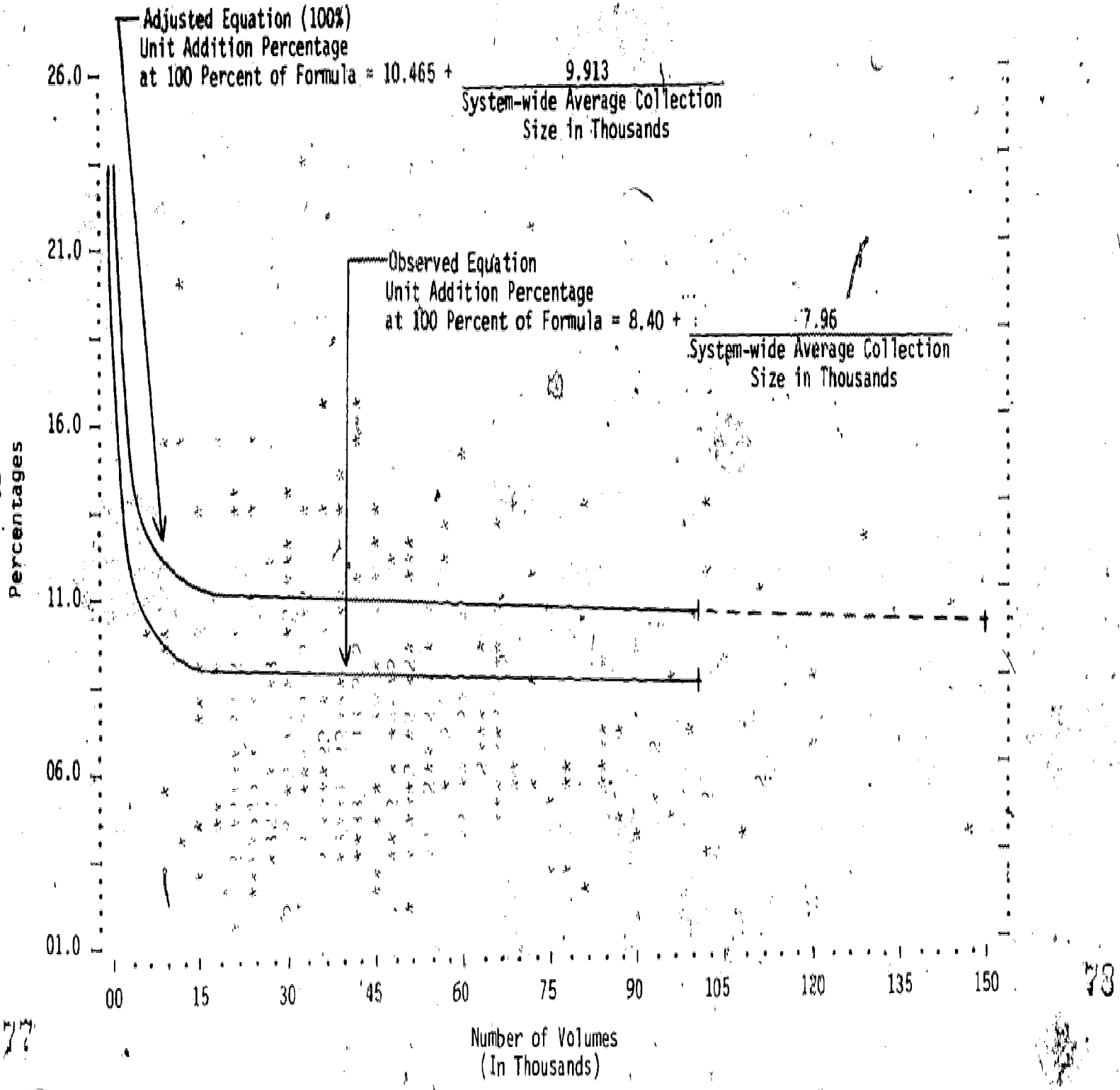
*Reflects an accumulative currency assumption in excess of five percent. The values shown are Washington State University's interpretation of the "standards" as used in their fiscal year 1977-78 budget request.

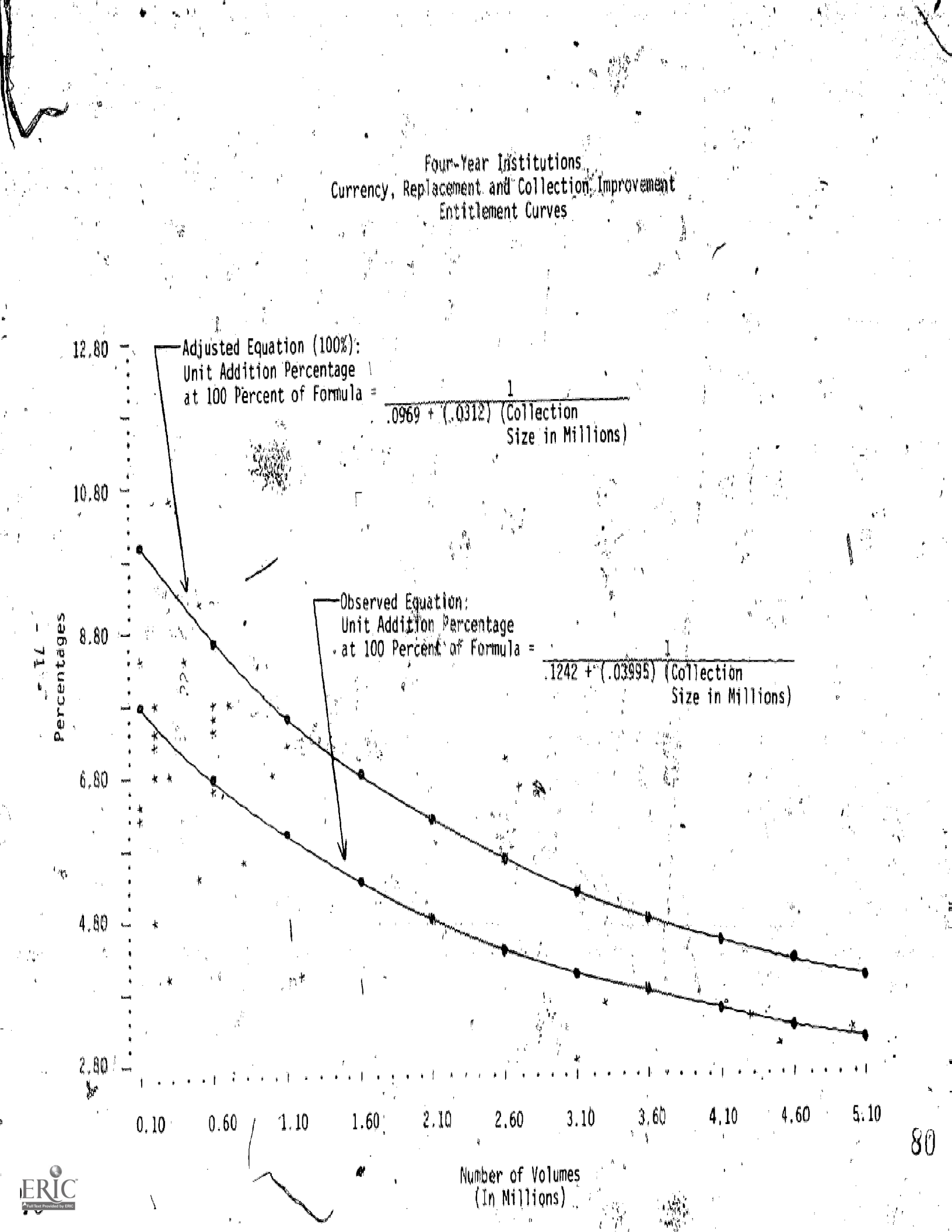
**To avoid the determination and subsequent monitoring of this area, the basic or opening day collection, both in the original four-year formula and in the staff recommendation, includes 5,000 units which are related to a core of undergraduate majors.

APPENDIX E

Two- and Four-Year Acquisition Curves

Community College System
Currency, Replacement and Collection Improvement
Entitlement Curves




Four-Year Institutions
Currency, Replacement and Collection Improvement
Entitlement Curves
Adjusted Equation (100%):
Unit Addition Percentage
at 100 Percent of Formula = 1 / .0969 + (.0312) (Collection Size in Millions)
Observed Equation:
Unit Addition Percentage
at 100 Percent of Formula = 1 / .1242 + (.03995) (Collection Size in Millions)
Percentages
12.80
10.80
8.80
6.80
4.80
2.80
0.10
0.60
1.10
1.60
2.10
2.60
3.10
3.60
4.10
4.60
5.10
Number of Volumes
(In Millions)

APPENDIX F

Department of Printing

1974-75 Library Rebinding Estimates

DEPARTMENT OF PRINTING

LIBRARY REBINDING CHARGES

Fullbinds and periodicals	(not to exceed)
Up to and including 10"	$7.00
Up to and including 12"	7.50
Up to and including 14"	8.60
Up to and including 16"	10.20
16" and over	2.00/in. or fraction thereof
Over 2-1/2" thick	1.20/in. or fraction thereof
SPECIAL OPERATIONS	
Rush Service, per item	2.50
Extra Lines over 7, per line (Title & Shelf)	.30
Lettering to match sample or rub	2.00
Hand Sew, per volume up to 9" and not over 1-1/4" thick	4.90
Hand Sew, over 9" or 1-1/4" thick	1.20/add'l. inch
Map Pockets (including stubbing)	2.90
Paramont Sewing	.90
Stubbing, including paramont sewing	4.10
Newspapers - up to 1-1/2" thick (full size daily)	22.20
Newspapers - ea. additional inch	2.40
Thesis or dissertation - 1 or 2 of same title	5.50 per copy
Thesis or dissertation - 3 or more of same title	4.90 per copy
Recases, less per volume (off full bind price)	1.70
Special Handling	Time and material
Repair Library errors	1.80 minimum
Repair Printing Department Errors	No charge
Head bands	Time and materials

APPENDIX G

Library Operations Element Data Tables

September, 1976 Library Report

AVERAGE STAFF YEAR COSTS
1974-75

	Total Dollars	Total Staff Years	Average Staff Year Costs
University of Washington	$3,182,888	372.05	$8,555
Washington State University	1,300,333	157.75	8,243
Central WA State College	477,707	48.19	9,913
Eastern WA State College	366,599	46.57	7,872
Western WA State College	540,486	63.20	8,552
The Evergreen State College	215,001	23.50	9,149
Community Colleges*	2,982,537	300.10	9,939
Totals	$9,065,551	1,011.36	
Weighted Average			$8,964

Source: 1975-77 Governor's budget.

* Total staff years including audio-visual except that portion attributed to grants and contract funding (6.26 percent).

NOTE: Page 34, Table XII: September, 1976 Report.

COMPARISON OF CURRENT FORMULA TO RECOMMENDED FORMULA
FOR FOUR-YEAR COLLEGES AND UNIVERSITIES
AND THE COMMUNITY COLLEGE SYSTEM
1974-75

	Average Man-Year Costs Plus Operations Costs*	Existing Staff Years	Current Formula Entitlement Staff Years	Current Percent Of Formula	Revised Formula Entitlement Staff Years**	Revised Percent Of Formula	Revised Dollar Percent Of Formula***
University of Washington	$ 9,678	372.05	432.50	86.02%	416.27	89.38%	84.71
Washington State University	$ 9,359	157.75	246.28	64.05%	223.27	70.67%	64.59
Central WA State College	$11,317	48.19	85.13	56.60%	65.18	73.93%	81.94
Eastern WA State College	$ 8,639	46.57	94.80	49.02%	65.86	70.71%	59.82
Western WA State College	$ 9,520	63.20	113.05	55.90%	82.44	76.66%	71.47
The Evergreen State College	$11,098	23.50	35.13	66.90%	28.37	82.83%	90.0
Community Colleges****	$10,933	300.10	462.00	64.96%	499.08	60.13%	64.38

*Source: 1975-77 Budget Request Documents and Governor's Budget.

**Divisor of 300 used and includes: 36 (18 x 2) Base staffing for the University of Washington.
6 (3 x 2) Base staffing for Washington State University.
3 Base staffing for each of the state colleges.
54 (27 x 2) Base staffing for the community college system.

***Standard staff year dollar value: $9,036 + $1,175 = $10,211

****Average staff year cost plus operations cost is an estimate based on an operations cost of 10 percent ($9,939 x .10 = $994). All staff year values include the audio-visual component.

NOTE: Page [illegible], Table XIII; September, 1976 Report.

OPERATIONS COSTS PER STAFF YEAR
1974-75

	Total Dollars	Total Staff Years	Operations Cost Per Staff Year
University of Washington	$417,816	372.05	$1,123
Washington State University	176,062	157.75	1,116
Central WA State College	67,638	48.19	1,404
Eastern WA State College	35,735	46.57	767
Western WA State College	61,182	63.20	968
The Evergreen State College	45,809	23.50	1,949
Totals	$804,242	711.26	
Weighted Average			$1,131

Source: 1975-77 institutional budget requests. (Comparable detail not available for the community college system.)

NOTE: Page 49, Appendix B, Table III-B: September, 1976 Report.

CPE: 6/8/76