A.

IMPROVEMENT OF INSTRUCTION

Outline of Topics

Selection and Appointment of Instructors

Scouting
Systematic file of information about eligibles
Co-operation with appointment committees
of Universities and learned societies

Trying-out of candidates
Teaching fellowships
Lectures before seminars, etc.
Summer Quarter appointments

Appropriations to support these procedures

Policy of appointing in terms of men rather than of
subjects only; and of appointing when a first-rate man is available rather than only when a
vacancy occurs.

Education and Training.

Departmental arrangements for training junior instructors
Voluntary, cooperative study of teaching methods by all
members of the teaching staff, meeting from time to
time, in groups or as a whole body, for lectures and
discussions

Formulations of standards of good teaching devised to aid
teachers in criticizing and improving their own work

Training of advanced students in practical teaching methods
Special course of study for a teacher's degree

Supervision

Informal back-and-forth visiting of classes by colleagues
of similar rank, with the object of exchanging sugges-
tions

Visiting of classes by officers of departments or
faculties, especially if these visits are frequent
in the ordinary course of things, and co-operative
in spirit

Criticism by outside experts invited by the group
whose instruction is to be criticized.
Elimination of the Incompetent

Prompt elimination of persons of inadequate capabilities

Retirement of persons who no longer deserve to be retained on permanent appointment

Retention of the Superior

Salary and promotion policy to retain persons of superior ability, training and experience

Fiscal aspects of the problem of assuring experienced instruction; relation to size of classes, etc.

Opportunity and Incentive

Moderate burden of work, especially for junior men
Freedom from economic pressure necessitating outside work
Assistance in preparation of class material
Recognition and promotion on the basis of good teaching
Contribution to discussion of educational policies
Syllabi, examination papers, etc.—which should be published, so far as seems possible, and regarded as significant publications

Departmental democracy, co-operation and morale

Methods of Instruction

Preceptorial (tutorial) system for reading courses

Discussion groups in large classes, with outstanding students as group teachers

General lectures by exceptional lecturers in courses of many sections

Material

Outlines, syllabi, reading lists and other devices to organize work

Printed examination questions

Improved library accommodation
Facts and figures are absolutely basic to the understanding of economics.

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With a view to the improvement of teaching and scholarship in the University, the College Deans offer the following suggestions concerning policy and procedure in the selection and appointment of instructors.

Policy

Appointments to the Faculties should be made in terms of men, rather than in terms of subjects only. In accordance with this principle, an appointment may well be made when a man of outstanding ability is available, even though instruction is already being offered at the University in the field of his special interest. On the other hand, the mere fact that some particular subject is for the moment unrepresented in the curriculum should not ordinarily be felt to justify permanent appointment of a person of indifferent qualifications. Temporary gaps in the program of instruction may be regarded as inevitable and not necessarily serious; but the hasty and ill-judged appointment of an inferior professor in effect perpetuates a vacancy as long as he holds the position.
A plan to increase the training of teachers and
opportunities in the University, the College, and other
institutions, including educational policies and processes in the
selection and appointment of teachers.

...
Procedure

Members of the Faculties, and especially the chairmen of departments, should be at all times alert to discover scholars and teachers of promise in their particular fields, whether or not immediate appointments are contemplated. To support the efforts of the several departments, it is recommended that a central bureau be established in charge of a competent secretary whose duty it shall be to gather and file, currently, whatever information can be collected with reference to the academic records of such persons as have been reported to the secretary as possible candidates for appointment at some future time. Among other sources of information may be mentioned college and university catalogues or circulars containing descriptions of courses offered; statements from the appointment officers or committees of universities and learned societies; published proceedings of learned societies; current bibliographies and reviews, etc. Graduates of the University connected with other institutions might be asked to supply information about men whose work they were in a position to observe.

When an appointment is to be made departmental executives should consult the systematic files of information thus provided and be guided by them in their subsequent inquiries and negotiations.
Candidates for appointment should, so far as possible, be tried out in one or another of the following ways:

(a) As invited lecturers before audiences composed of student and faculty members of the interested departments. The subjects of such lectures, and the character of the audience on each occasion, should be arranged with reference to the sort of teaching that would be expected of the lecturer if he were appointed to the faculty of the University. Thus a candidate for an instructorship in elementary work should be asked to lecture to a junior college audience and to choose and treat his subject accordingly. It is desirable that trial lectures of this kind be given not singly, but in short courses extending over several days in order better to test the lecturer's organization of his material, and in order that opportunity may be given for informal personal meetings with the candidate.

(b) As instructors in the Summer Quarter

(c) As teaching Fellows - especially in the case of younger men. The teaching fellowships here contemplated would differ substantially from fellowships and assistantships as not ordinarily administered. The honorary character of the appointments should be strongly emphasized; the stipends should be nearly equivalent to what the incumbent might receive as a full-time instructor, and in every way the conditions of tenure should suggest opportunity for the teaching fellow, rather than such demands upon him as would interfere with his development. Particularly he should be advised and assisted in his efforts to organize his material for effective presentation, and, in general,
to make himself a successful teacher of his chosen subject. He should be led to feel that his tenure of the fellowship was advantageous to him, even if no appointment at the University followed.

To support these policies and procedures, special appropriations of money would be necessary. The obvious expenditures would include salary and office expenses for the proposed secretary; lecture fees; teaching fellowships. Furthermore, if scouting for promising personnel is to be effective, and if men under consideration for appointment are to be observed and interviewed, traveling and incidental expenses must be provided for. Specifically, it may be desirable to pay a part of the expenses incurred by any member of the faculty sent as an authorized departmental representative to attend the meeting of a learned society and to report upon the promising men present and participating at the meeting.

The total of these various expenditures should be considerable if the policies indicated are to be pursued with energy and with promise of full success. The College Deans venture to suggest, however, that at the maximum these expenditures would amount to but a small fraction of the sum now spent as salaries of ineffective professors. If the proportion of unfortunate appointments could be reduced one-fourth by the measures suggested, than actual financial economy would probably be effected. One hesitates to reckon in dollars what might be gained for the University by the discovery and appointment of men destined to become preeminent as scholars and teachers.
QUALITIES DESIRABLE IN INSTRUCTORS IN ELEMENTARY COURSES CONDUCTED BY THE LECTURE-DISCUSSION METHOD

I. Knowledge and Organization of Subject Matter
   a. Possessing a broad and accurate knowledge of the subject
   b. Selecting the material of the course effectively
   c. Organizing the course so that the sequence of topics is natural and clear
   d. Preserving proper balance in the emphasis on important topics
   e. Pointing out the relationships between the materials of the course and other subjects; between these materials and current affairs

II. Skill In Instruction
   a. Giving evidence by the readiness and orderliness of lectures and discussions that the daily work is carefully planned.
   b. Getting the point of view of the students and adjusting to their power of comprehension.
   c. Making clear explanations
   d. Stimulating intellectual curiosity
   e. Conducting discussions with skill. That is—

   Sticking to the point
   Avoiding the introduction of too many details
   Possessing skill in questioning
   Securing the participation of the students
   Exhibiting fertility in suggestions

f. Making satisfactory assignments. That is—

   Making assignments that are definite
   Distributing assignments as evenly through the course as the conditions of the instruction permit
   Making assignments that indicate careful estimation of the time required to prepare them

   c. Helping students in the formation of desirable study habits. That is—
      Giving specific directions, when needed, in regard to methods of study
      Continuing this directive criticism as needed throughout the course
CURRICULUM DEVELOPMENT IN INSTRUCTIONAL DESIGN

1. Knowledge and Organization of Subject Matter
2. Process of Planning and Content Knowledge of the Subject
3. Specification of Narrative of the Course Elements
4. Organizing the Course so that the Sequence of Topics is
   Sequential and Oriented
5. Preparing Proper Pedestals in the Appropriate Order and Topic
6. Potentiating the Interdependence Between the Extractions
   of Common and Certain Elements Between These Extractions and
   Common Elements

II. SKILL IN INSTRUCTION
   1. Giving Emphasis to the Relationship and Organization of Courses

   a) Giving Emphasis to the Relationship and Organization of Courses
   b) Giving Emphasis to the Relationship and Organization of Courses

   2. Making Clear Explanations

   a) Making Clear Explanations
   b) Making Clear Explanations

   3. Constructing Adequate Criteria

   a) Constructing Adequate Criteria
   b) Constructing Adequate Criteria

   4. Making Adequate Explanations

   a) Making Adequate Explanations
   b) Making Adequate Explanations

   5. Identifying Adequate Assumptions

   a) Identifying Adequate Assumptions
   b) Identifying Adequate Assumptions

   6. Helping Students in the Formation of General Acceptance

   a) Helping Students in the Formation of General Acceptance
   b) Helping Students in the Formation of General Acceptance
h. Returning written work with constructive criticisms

i. Measuring adequately the results of instruction by the use of written tests. That is --

Testing with sufficient frequency
Testing ability to understand and apply principles as well as ability to retain information
Employing some of the newer types of examination such as the true-false, sentence-completion and best-answer
Taking tests reasonably brief

j. Giving due attention to the marking of students. That is--

Familiarizing himself with the principles in accordance with which the marking system of the college is constructed
Applying this system properly in the assignment of marks
Basing marks, so far as possible, upon objective measures of achievement

k. Managing routine matters efficiently. That is--

Giving due attention to seating of students, recording attendance, and regulating the physical conditions of the classroom
Meeting and dismissing classes, returning papers, and attending conferences promptly

III. Personal Qualities

a. Interest in subject
b. Interest in teaching
c. Sympathetic attitude toward students, including freedom from sarcasm
d. Tact in dealing with students
e. Accessibility to students
f. Self-reliance and confidence
g. Open-mindedness
h. Attractiveness of manner
i. Sense of proportion, including a sense of humor
j. Freedom from personal idiosyncrasies that interfere with effectiveness
II. Personal Characteristics

- Interest in subject
- Interest in teaching
- Effective attitude toward students, including feedback from students
- Ability to adapt with students
- Possibility to communicate
- Self-reliance and confidence
- Open-mindedness
- Awareness of manners
- Sense of proportion, maintaining a sense of humor
- Freedom from personal introversion and introversion with others
IV. Professional Development

a. Keeping up to date in the literature of his subject

b. Devoting systematically a reasonable portion of time to research or other creative work

c. Keeping informed in regard to the more recent developments in teaching

d. Endeavoring by experiment to improve the methods of conducting his course

e. Attending the meetings of associations organized for the advancement of his line of work

V. University Cooperation

a. Showing loyalty to his department and to his colleagues

b. Cooperating with members of the faculty and with the administrative staff in service on committees and in other helpful ways

c. Manifesting an interest in the more general problems of university policy and organization, and a readiness to assist in the solution of these problems
V. Professional Development

Understanding the importance of understanding the importance of the relationship between education and professional development.

A. Faculty Cooperation

- A cooperative effort among faculty members to enhance the educational experience.
- Teachers are encouraged to participate in professional development activities.

B. University Cooperation

- Departmental cooperation and growth among faculty members.
- Professional development opportunities are provided by the University.

C. Recommendations for Improvement

- Greater emphasis on professional development opportunities.
- Increased collaboration among faculty members.
- Enhanced opportunities for faculty advancement.

D. Conclusion

- The importance of professional development cannot be overstated.
- Continuous improvement and growth are essential for professional success.
March 22, 1909

My dear President Judson:

The Committee on Instruction has prepared blanks in accordance with the vote of the Faculty that it should obtain information from Faculty, students, and Alumni. Certain questions as to financial matters present themselves:

1. The printing of the blanks Mr. Vincent informs me has been authorized by him.

2. Another item of expense which he did not feel authorized to pass upon is this: we have asked students questions regarding their work and regarding the instruction, and we believe that they will feel more free to answer these questions if they can be assured not only that their names will not be known to instructors, but also that their handwriting will not be seen by the instructors concerning whose courses they report. In the case of a small class it would be easily possible for the handwriting to be identified. We desire, however, that the instructors should see what their students have to say concerning the work in their respective courses, hence the committee thinks that it would be advisable if we could assure the students that their answers would be typewritten before being open to inspection. We shall provide that the name can be written upon a detachable slip and hence will be known only to the clerk handling the reports. It cannot be estimated precisely what it would cost to have the students' reports copied by a typewriter. I estimate roughly that the expense should not exceed $100. The committee would like to know, therefore, whether this could be authorized. Personally, I doubt somewhat whether we should get a large and full reply unless we could assure students of this.

3. In the case of reports from Alumni we shall request them to have their replies typewritten, but I think that if these are open to inspection, it might be well to have all typewritten that are submitted in handwriting. The expense for copying the Alumni reports, of course, would not be so great as that in the case of students.

4. The committee will need considerable clerical help if reports are handed in in any satisfactory numbers. There will be considerable to be done in the way of tabulating and classifying and it will require considerable intelligence. It is not fair to require this work of the members of the committee. I think that it would be advisable to have a clerk provided for, one competent to relieve the committee as much as possible. This does not need to be acted upon immediately, but I mention it here in order that the whole situation may be before you. It is intended to send out blanks soon after
the opening of the spring quarter. The question raised under (2) above needs to be passed upon before the blanks can be sent out.

I shall be glad to call upon you if you would like further information as to our plans and the proposed blanks.

Very truly yours,

James H. Tufts.
Chicago, July 19, 1921.

Committee on Instruction and Equipment,
University of Chicago.

Gentlemen:

For the information of the Committee in connection with its deliberations on the subject of the possibility of an increase in certain fees I beg to present below a statement comparing the tuition fees adopted by several institutions for the fiscal year 1921-22. These apply for three-quarters or two semesters.

State Institutions -

<table>
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<tr>
<th>Institution</th>
<th>Residents</th>
<th>Non-Residents</th>
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<tbody>
<tr>
<td>Wisconsin</td>
<td>$24.00</td>
<td>$148.00</td>
</tr>
<tr>
<td>Ohio</td>
<td>40.00</td>
<td>140.00</td>
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<td>Indiana</td>
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<td>Missouri</td>
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<tr>
<td>Michigan</td>
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Endowed Institutions*-

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<th>Institution</th>
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<th>Non-Residents</th>
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<tr>
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<td></td>
</tr>
<tr>
<td>Carleton College</td>
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<tr>
<td>Leland Stanford</td>
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<td>225.00</td>
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<tr>
<td>Harvard</td>
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<tr>
<td>Brown</td>
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<td>250.00</td>
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<tr>
<td>Princeton</td>
<td>300.00</td>
<td>300.00</td>
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<tr>
<td>Vassar</td>
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<td>300.00</td>
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*Fee mentioned is for graduate or undergraduate tuition, except at Chicago where graduate fee is $150.00.
<table>
<thead>
<tr>
<th>Item Description</th>
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<th>Price</th>
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<tr>
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<tr>
<td>Service</td>
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<tr>
<td>Total</td>
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<td>780.00</td>
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</tbody>
</table>

**Note:**
- Service: The service provided includes:
  - Installation and connection
  - Commissioning and testing
  - Commissioning and testing

**Additional Information:**
- The service is subject to the terms and conditions specified in the contract.
- Any discrepancies or issues shall be resolved through negotiation and mutual agreement.
- The service is provided in accordance with the stipulated timelines and quality standards.
2. Law

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<td>Ohio</td>
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<table>
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</tr>
<tr>
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<td>$200.00</td>
<td>$200.00</td>
</tr>
<tr>
<td>Leland Stanford</td>
<td>$225.00</td>
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*A further increase is expected within a year or two*.

In addition to the foregoing, the fee in the Harvard Graduate School of Business Administration is $400.00, and in the Medical School it is $300.00.

At Columbia the situation is a little difficult to translate into terms of quarterly fees since their charge is based upon a valuation for each course. A fair comparison could be made only after a study of the fees in groups of courses that would be comparable to our situation.

The information received in response to inquiries does not give a basis of comparison of fees in other departments of the University.

With regard to the State institutions, I should like to call your attention to the situation at Wisconsin, where the tuition fee for non-resident students is $148.00 as against a fee for resident students of $24.00. The Business Manager at the University of Wisconsin informed me that over a period of years the attendance of non-resident students had stood fairly constant at about twenty-eight per cent. It may be unwise to
A frequent instruction to students is to take a tour of the campus.

To ensure the instruction is effective, it is necessary to study the campus map and to familiarize oneself with the key landmarks.

C. Geographical locations and key features are important to remember.

D. The campus has a variety of buildings and areas, each with its own unique characteristics.

E. The purpose of this instruction is to help students navigate the campus effectively.

F. By understanding the layout of the campus, students can avoid getting lost and can efficiently plan their routes.

G. It is essential to review the campus map and to practice locating key landmarks.

H. This will help students feel more comfortable and confident while exploring the campus.

I. The instruction is aimed at preparing students for success on campus.

J. Knowing the campus layout is a valuable skill that will be useful throughout their academic journey.

K. By familiarizing oneself with the campus, students can develop a sense of familiarity and confidence.

L. This will enable them to navigate the campus efficiently and to make the most of their time on campus.
draw a general conclusion from this case, but in view of the low rates in other states it seems rather clear that the student's selection of an educational institution is not based upon the smallness of the fee. Dean Salisbury in the main agrees with this conclusion. A further illustration of this point may be drawn from a comparison of the fees at Carleton and at Minnesota. In the latter institution the residents' fees in Liberal Arts will be $60.00 per year whereas at Carleton it will be $210.00.

At the suggestion of the President I have interviewed the Deans in the various Colleges and Schools of the University and none feels that an increase in fees will have a detrimental effect on the registration. They are all sympathetic toward an increase of $10.00 in the present tuition fees, effective with the beginning of the Summer quarter 1922, with the exception of Mr. Judd, who feels that while an adjustment should be made in the fees, it is probably unscientific to advance fees in the manner indicated.

It has been suggested by Dean Salisbury that if the graduate tuition is increased some adjustment should be made in the fellowship stipends. Dean Robertson is anxious that provision be made for an increase in the remission of tuition or a provision for a loan fund, or its equivalent, to be used in connection with the acceptance of the student's note for a period of years, payments to begin after graduation. It occurs to me that it would be entirely feasible to accept the student's note for the amount of the increase from either the original rate of $40.00 per quarter (and $50.00 in the Law School) or
I am very sorry to learn of the death of your sister and to hear of the great suffering she has endured. My heart goes out to you in this time of sorrow. If there is anything I can do to help, please let me know.
the increase over the subsequent advances in the several departments.

If all tuition fees, exclusive of those in the University College, Correspondence-Study Department, High School, and Elementary School should be increased $10.00 per quarter, the matriculation fee from $5.00 to $10.00, and students in the Divinity School allowed three-quarters remission of a fee of $60.00 (to which Dean Mathews is agreeable), the cash receipts of the University, based on the attendance for the year 1920-21, will be increased by approximately $195,000. - $166,000. as a result of increase in tuition fees and $29,000. as a result of the increase in the matriculation fee. From this increase, if approved, it will be necessary to provide for the adjustment in the fellowship stipends and the arrangement to enable worthy students without funds to attend the University, either by remission of tuition, scholarships, or loan fund. The net amount of the increase available for general purposes of the University I should think would aggregate approximately $170,000. to $175,000.

The natural increase in attendance in the University during the year 1921-22 (based on previous experience) will be sufficient to obviate the necessity of providing for a decrease in attendance in case the fees are increased. In other words, during the year 1922-23 we could suffer a diminution in attendance (assuming that the increase in rates will be effective with the Summer quarter 1922) equal to the increase in 1921-22 and base our estimates of the results of the increases indicated upon the attendance for the year 1920-21, without allowance for shrinkage. This of course is based on the assumption that economic condi-
The history of the development of the society for

In the early days, the society faced numerous challenges, such as securing funding and establishing a network of supporters. However, with the support of local businesses and community leaders, the society was able to overcome these obstacles and begin its mission.

The initial focus of the society was on providing educational opportunities for the local community. This was achieved through the establishment of a series of programs and workshops that aimed to enhance literacy and improve the quality of life for the residents.

Despite these efforts, the society faced financial difficulties in its early years. However, through strategic planning and the dedication of its members, the society was able to sustain itself and continue its mission.

In recent years, the society has expanded its reach to include support for cultural and artistic initiatives. This has been made possible through partnerships with local organizations and the continued dedication of its members.

Looking ahead, the society aims to continue its work in providing educational opportunities and cultural enrichment to the community. With the support of its members and the wider community, the society is well-positioned to achieve its goals and make a positive impact on the lives of its members.
tions will become no worse.

The foregoing information was communicated to President Judson and there is given below a copy of his telegram in reply, which was submitted to the meeting of the Board on July 12. It will be noted that he makes no mention of an increase in matriculation fees. I have written to him concerning the matter, but have not yet received his reply.

"Approve Ten Dollars Increase. Number University Fellowships and Scholarships should not be decreased. Fellowship should not holder Four Hundred and Two Hundred respectively. Lump sum for Loan Fund should be provided."

Respectfully submitted,

[Signature]
the non-Hispanic white population and non-Hispanic black population, and the Hispanic population and non-Hispanic white population. However, it is also important to consider the impact of these factors on the overall trend in educational attainment.

In conclusion, the increases in educational attainment observed in the United States are not uniform across all groups, and there are underlying social and economic factors that contribute to these trends. Further research is needed to better understand the drivers of these changes and to develop effective policies to promote equal opportunities for all individuals.

[Signature]

[Date]
President Harry Pratt Judson,
University of Chicago.

My dear Mr. President:

At the recent meeting of the Committee on Instruction and Equipment when the proposed increase of tuition fees was once more under discussion, it was voted to send to each member of the Board a copy of Mr. Flimpton's recent report which deals with the question from the point of view of University finance.

Enclosed please find a copy of his report.

The Committee is not ready as yet to submit its recommendations to the Board.

Very truly yours,

[Signature]

Secretary.
The Committee noted with pleasure the agreement of the Federal Government on the recommendation made by the Committee. The Committee also welcomed the proposal to increase the number of members of the Federal Government in the Committee. The Committee was taken to task by the members of the Committee. The Committee was instructed to report on the matter next month.
Greeley, Colorado.
August 12, 1921.

Committee on Instruction and Equipment,
University of Chicago.

Gentlemen:

On my trip west I have been giving further consideration to the matter of the suggested increase in tuition fees, and for your information I am setting down my conclusions.

In my opinion the University's need of additional income in the near future is expressed by the following:

Surplus for the year 1920-21 - $73,426.
which amount included the grant of $50,000 from the General Education Board.

Add to the surplus the supplemental grant, also from the General Education Board, for 1921-22 of $50,000.

This gives a total excess of income of $123,426.

The following are deductions that may be specifically designated at this time as applying to the year 1921-22:

1. The surplus includes an item of $18,517, which consists of an adjustment of dividends, as explained in the report for the year 1920-21. This amount will not be duplicated in the year 1921-22.

2. According to current reports, taxes on fee property owned by the University will be increased by about 40 per cent. This increase would adversely affect the income from fee property by about $48,000.

3. Special assessments for paving Ellis Avenue will reduce the income from the property adjacent to the University by about $10,000 a year for five years.

4. The current dividend returns on the original group of Standard Oil stocks will produce about $42,000 less than was received in 1920-21.

Net excess of income, taking no other factors into consideration $4,909.
If during the year 1922-23 the grant of the General Education Board to the University is not continued the prospect for that year would be affected adversely, as the discontinuation of the grant would reduce the income in 1922-23 by $100,000, and leave the University with a prospective deficit. Other factors in the situation appear much more indefinite than those mentioned. It is hoped that the indefinite factors will not affect the situation adversely, but it will be some months before a statement embodying a fair degree of accuracy can be made on this subject. In general, however, provision for the growth of the University inevitably calls for income in addition to that which may be realized from an increase in registration in order to maintain desirable standards.

To meet the situation for 1922-23 the following possibilities may be considered:

1. A reduction in operating expenditures. The larger portion of the expenditures of the University is for salaries. In my opinion any increase in registration will require an increasing number of instructors in the higher ranks. This is particularly true if the University is to maintain its position in the forefront of educational institutions. Accordingly, in my judgment, there is slight possibility of reducing instruction costs. Some reduction may be secured in cost of operation of plant, but such costs will eventually increase with the placing of additional buildings in commission.

2. Gifts for current expenses. Obviously this is a more or less hazardous basis for meeting the necessary expenditures of the institution unless donors have in mind eventual capitalization of such gifts for current needs.

3. Income from additional endowment. This of course in principle is the ideal method of meeting the situation. A successful effort in this direction would not only have the result of producing independently income for the budget, but also of meeting the conditions of the General Education Board, and thus insure the continuation of their grant, presumably to be capitalized in whole or in part at a later date.

4. Increase of student fees. If there is no likelihood of securing additional endowment, the only remaining alternative seems to be an increase of fees. Speaking from the financial point of view, the increase of tuition rates, in my opinion, offers the least difficult solution of the situation. An increase of $10.00 per quarter gives a fee that is still practically the lowest in the country for endowed institutions of the character of the University of Chicago. Even with such an advance the tuition fees probably will not cover the direct instruction costs. With respect to
the State universities: In my opinion they are inevitably on
the eve of increasing fees, since the burden of taxation is
too heavy to admit of a continuance of the present low fees,
particularly when applied to professional courses. An
increase of fees for such courses will in all probability call
for an increase of fees for liberal arts and similar courses.
It seems to me the University has before it a possibility of
leadership in a movement to place the cost of university edu-
cation in a larger degree where it properly belongs, - on the
individual instead of the State. Of course fees constitute
a hardship on the student, with or without marked ability,
who may be without funds. This condition is recognized by
the University and income from scholarship endowments, unen-
dowed scholarships, tuition remissions, and loan funds are
provided to meet this condition. An increase in fees presents
a situation differing only in degree from that existing at the
present time. Any plan meeting at least proportionately an
increase in fees by a similar increase in endowed scholarships,
unendowed scholarships, tuition remissions, and loan funds
meets the situation in so far as it affords to the poor boy a
continuation of his present opportunity for securing a univer-
sity education.

The foregoing does not touch on the proportion of the
required expenditures that should be assessed against the
student body or the proportion that should be derived from
endowment income. I fancy the varying proportions in endowed
institutions are the result largely of local conditions and
not the application of well defined principles. (Leland
Stanford University is a case in point. Originally there was
no student fee on the assumption that the endowment income was
sufficient to meet the needs of the institution. Later it was
found necessary to charge a fee of $120.00 per year, now in-
creased to $225.00 per year.) The establishment of such a
proportion by the University would amount to the announcement
of a principle from which it would be necessary to deviate in
accordance with the possibility of failure to secure the
stated proportion from endowment income.

Very sincerely yours,

[Signature]
December 10, 1921

President Harry Pratt Judson,
The University of Chicago,
Chicago, Illinois.

Dear President Judson:

Acknowledge yours of December 9 in reference to matters to come up before the Committee of Instruction and Equipment.

1. Merging Public Speaking with English:

I, personally, feel I had a great benefit from the Public Speaking I was required to do at the University and think, therefore, it is a distinct advantage to students to have some of this work required. I feel, and I am sure from conversation with you that I voice your sentiments, that our Department has not been particularly well run and I think it may have some advantage in being merged with the English Department, although I hope that the importance of the work will not be overlooked on this account.

2. The other matters mentioned are entirely satisfactory to me.

Yours cordially,

[Signature]

Harold H. Swift
Union Stock Yards
Chicago
Three Year Program of
The School of Commerce and Administration
Submitted by Mr. Marshall
May, 1923

The School has reached a stage in its development that makes it wise to survey its program, to make a forecast for the next three years, and to adopt certain permanent policies with respect to its instructing staff:

1. The School has always had before it reasonably definite educational aims. It hopes to contribute to:

   a. A better foundation of social studies in the public schools.
   b. A better commercial curriculum in the senior high school.
   c. A more mature and scientific presentation of economics and business material in college; an organic functional curriculum.
   d. A new order of graduate work; a new order in economic research.
   e. A new college spirit with particular reference to Schools of Commerce and Administration.

2. Progress has been made in these matters. The secondary and collegiate curricula have been blocked out and the next 18 to 24 months should see the material available. The major constructive tasks of the next three years are:

   a. Training instructors for other colleges.
   b. Building up a staff and a student constituency competent to handle research.
   c. Laying the foundations for a new type of advanced work.
   d. Pointing all of the work so as to contribute more definitely to the development of personality.

3. To accomplish this we should adopt a forward-looking policy with respect to the instructing staff. This involves the following items:

   a. Increased opportunity for contacts with business problems.
THREE YEAR PROGRAM OF
THE SCHOOL OF COMMERCIAL ADMINISTRATION
Supervised by Mr. Harpell
May, 1952

The School has developed a place in the development of business education to serve the needs of the business world by making contact with its practitioners and by offering courses in business administration.

A clear objective must be set for the three years' courses, and to make contact of reasonable order with the business world must be possible.

I. General Administrative aims: To organize contact with:

a. A better understanding of societal structure in the business world.

b. A better understanding of the economic position of the nation.

c. The economic and business environment in colleges.

d. A new aspect of the economic world in a new way.

e. Economic discipline.

f. A new college spirit with particular reference to:

1. A new college spirit with particular reference to:

2. The economics of commerce and administration.

3. Training for other colleges.

b. Participation in the needs and special conditions of the student body.

c. Development of personal contacts.

d. Training for professional work.

e. Promotion of the work to be done to maintain.

Note: General interest in the development of commerce.

4. To emphasize that no one job has a permanent place.

b. Opportunity for students with experience.
b. The adoption of a definite policy with respect to retention and promotion on the basis of unique service in teaching, research, or administration.

c. The adoption of a salary scale which will be on the general basis of the Law School schedule as regards its upper limits but which would have large overlappings in the different classifications. The following scale is suggested:

- Assistantships, $3,000.00 to $2,000.
- Instructorships, $2,000.00 to $4,000.00.
- Assistant Professorships, $3,000.00 to $5,000.00.
- Associate Professorships, $4,000.00 to $6,000.00.
- Professorships, $5,000 to the top limit of the Law School Scale.

A

Appointments to associate professorships are for three years; appointments to professorships are for five years. Other appointments are for one year.

It would be understood that a man who qualifies on all three of the bases of promotion would quickly be advanced to a salary of $5500 or $6000. Advances beyond that figure would not be automatic, except in small amounts, (perhaps $250 a year). Larger increases would be in terms of clearly proven cases.

4. The administrative staff should be reorganized so as to provide an assistant dean who would be responsible for the routine administration. It is recommended, further, that we have his assistants teach on a two-thirds basis under a rotation scheme.

5. The acceptance in principle but, of course not in detail of a three-year budgetary program as set forth below. This statement gives a clear indication of the financial implications of the foregoing paragraphs. The following remarks are pertinent:

a. The annual income from the school will presumably be in the neighborhood of $240,000, $160,000 coming from fees and $80,000 from the Williams Fund.

b. Such a program would be based upon the hope (and expectation) of securing added funds from Foundations and from business houses for cooperative research.
<table>
<thead>
<tr>
<th></th>
<th>1922-23</th>
<th>1923-24</th>
<th>1924-25</th>
<th>1925-26</th>
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<tbody>
<tr>
<td>Administration</td>
<td></td>
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<tr>
<td>Instruction</td>
<td></td>
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</tr>
<tr>
<td>a. Staff</td>
<td>81,400</td>
<td>97,900</td>
<td>110,000</td>
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<tr>
<td>b. Assistants</td>
<td>6,995</td>
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<td>6,995</td>
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<td>c. Outside Lecturers</td>
<td>2,500</td>
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<tr>
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<tr>
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<td>20,445</td>
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<tr>
<td>Publications</td>
<td>5,000</td>
<td>5,000</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>173,665</td>
<td>189,915</td>
<td>204,415</td>
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<td>Requests not granted 23-24</td>
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<tr>
<td>a. Personnel</td>
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<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
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<tr>
<td>b. Research</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
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<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>185,665</td>
<td>201,915</td>
<td>216,415</td>
<td></td>
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</table>

5. An alternative financial program is entirely discussable but its figures would run higher than those sketched above. It is entirely discussable that the financial program should be organized in terms of the following principles:

a. That the University will provide out of its general funds for housing, heat, light, equipment, administration, etc.

b. That student fees in a lucrative professional school should be relied upon to furnish instruction.

c. That research, publication, etc., should be provided out of special funds or the income of special endowments.
<table>
<thead>
<tr>
<th>Year</th>
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<th>Instruction</th>
<th>General</th>
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<tr>
<td>1938-39</td>
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<td>1939-40</td>
<td>15,000</td>
<td>30,000</td>
<td>45,000</td>
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<td>1940-41</td>
<td>18,000</td>
<td>38,000</td>
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<tr>
<td>1941-42</td>
<td>21,000</td>
<td>46,000</td>
<td>67,000</td>
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</table>

*Note: Figures may not add up due to rounding.*
After consideration of the presentation by Mr. Marshall the Committee voted to make to the Board of Trustees the following recommendations:

1) That the general policy enunciated by Mr. Marshall in the enclosed paper be approved.

2) That the Committee recommend the Board of Trustees to adopt the salary scale proposed by Mr. Marshall, viz.:

   - Assistantships, $300.00 to $2,000.00
   - Instructorships, $2,000.00 to $4,000.00
   - Assistant Professorships, $5,000.00 to $5,000.00
   - Associate Professorships, $4,000.00 to $5,500.00
   - Professorships, $5,500.00 to $10,000.00

3) That the Committee recommend to the Board of Trustees that an appropriation of $7,000 for personnel and $5,000 for research, or so much thereof as may be found necessary be made for the year 1923-24 and underwritten from the special contingent fund.

4) That the Committee recommend to the Board of Trustees that the principle be established of allotting to the School of Commerce and Administration as a basis of the budget for each year the anticipated receipts of that year and $60,000 from the income of the Williams Fund, with the understanding, however, that this principle will not be fully operative until the year 1925-26, and that its full application at that time, and its partial application in the interval, will be contingent upon the University being able to secure the funds necessary to make these increases in the budget of the School of Commerce and Administration without unduly hampering the work of the other departments of the University. (This raises the budget for 1923-24 to $165,665, and suggests for 1925-6 a possible budget of approximately $220,000.)

5) That Mr. Marshall be asked to give his cooperation in the effort to secure additional funds with which to meet these increases of the budget.
THE COMMITTEE RECOMMEND THAT THE BOARD OF TRUSTEES MAKE TO THE BUDGET A TOTAL OF $250,000 FOR THE UNIVERSITY.

Recommendations

1) The General Policy Committee of the University shall formulate recommendations to the Board of Trustees for the following:

   - Additional appropriations of $250,000

2) That the Committee recommend to the Board of Trustees to:

   - Accept the salaries and benefits of the University.

3) To make a tentative budget of $250,000 for 1933-34, to be reviewed and approved.

Specific Committee Report

That the Committee recommends to the Board of Trustees that the principle be established in the financial plan of the University, to be implemented by the administration, that the increase in the Appropriation to the University, as a result of the increase in the Williams Fund, shall not be fully offset by the decrease in the University's budget. The Appropriation to the University will be increased to a sum not less than $250,000, and the Budget of the University will be increased to a sum not less than $250,000.
Mr. Marshall has indicated his entire satisfaction with the action recommended by the Committee and the Acting President recommends that the recommendations of the Committee as stated above be adopted.
July 26, 1923.

To the Committee on Instruction and Equipment:

I am convinced, therefore, to allow him to leave it would be a very bad step. To avoid the necessity of a meeting of the Committee on Instruction and Equipment I beg leave to recommend, therefore, that his salary be increased of these the most important ones, namely $7,000, with the approval of the Chairman and Vice Chairman. I will be necessary to undertake this sum from the Committee's general reserve.

Some two or three years ago Professor T. P. Cross, Mr. Russell P. Magill of the law School Faculty of the Department of English and of that of Comparative Literature was called to the University of Michigan at a salary and I recommend that it be accepted. On the nomination of considerably exceeding that which he was then receiving at Beno Hall I recommend that Mr. Sydney W. Schiff, Ph.B., Uni-

University would care for him. He has now received a call at a salary of $7,000 from the University of California and Mr. Howard Adler presents his resignation and has been approached also by another University. I am assured by Professor Manly and other members of the Faculty competent to judge that in the field of Comparative Literature Mr. Cross is unsurpassed in this country or Europe, and perhaps un-

The University of Chicago
CHICAGO, ILLINOIS
Office of the President
To the Committee on Instruction and Employment

To verify the necessity of a member of the Committee on Instruction and Employment I have reason to support to you for your approval of a member of the faculty of the department of mathematics. I am not aware of any other faculty member who could contribute to the department in the same way. I am an apparatus engineer and a mathematics graduate of the University of Chicago.

I look forward to the opportunity of the University of Chicago, and I have therefore submitted my application for the position of apparatus engineer. I am an apparatus engineer and a mathematics graduate of the University of Chicago. I am an apparatus engineer and a mathematics graduate of the University of Chicago. I am an apparatus engineer and a mathematics graduate of the University of Chicago. I am an apparatus engineer and a mathematics graduate of the University of Chicago.
each of these fields it would be difficult to replace him in the two combined, probably impossible. I am convinced, therefore, to allow him to leave us would be a very bad bargain, and that he is not unreasonable, in view of the call to California, in desiring to know what his future here will be. I beg leave to recommend, therefore, that his salary be increased to $7,000, with the question of distribution of the salary between the two departments left to my decision later. It will be necessary to underwrite this sum from the contingent reserve, from the general reserve.

Mr. Roswell F. Magill of the Law School Faculty has presented his resignation to take effect Oct. 1, 1923, and I recommend that it be accepted. On the nomination of Dean Hall I recommend that Mr. Sydney K. Schiff, Ph.B., University of Chicago 1921, and J.D. 1923, be appointed as for the remainder of the current year Mr. Magill has at my suggestion for one year from October 1, 1923, at a salary of $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleges, retaining some for full $2,500 within the budget of the Colleg. I recommend that his suggestion be accepted. Mr. Judd recommends the appointment of Clifford High School presents his resignation to take effect Oct. 1, 1923, and I recommend that it be accepted.

Mr. Judd recommends the appointment of Clifford as second to the President of the Board...
In the two paragraphs below I have attempted to express my views on the question of leave of absence for an extended period of time. It is my belief that the University should give serious consideration to this matter, and I would be grateful if you would be willing to discuss the matter with me at your earliest convenience.

I have been informed by several of my colleagues that they have been considering the possibility of taking an extended leave of absence. They have expressed the belief that such a leave would be beneficial both to the University and to their own professional development.

I would be happy to provide you with any additional information you may require, and I am willing to discuss this matter with you at any time that is convenient for you.

Sincerely yours,
[Signature]

[Name]
Holley as instructor in Science and Mathematics in the University High School for one year from October 1, 1923 at a salary of $2400, budget, page 27, item 7, and I recommend that the appointment be made.

Committee on Instruction and Equipment I now leave to Professor Merriam recommends that Professor White submit to you for your approval or comment the following recommendations:

1. The Second International Congress of Public Administration to be held in Brussels, Sept. 23 to 26, 1923 at an expense of $400, to be borne by the University. I recommend that the request be granted, and the amount be underwritten from the general reserve.

Some two or three years ago Professor F. R. Cross, Miss Alice M. Baldwin, instructor in the Department of History presents her resignation and would like to take effect literature was called to the University of Michigan at a salary after the Autumn Quarter. I recommend that the resignation be considerably exceeding that which he was then receiving at accepted to take effect December 31, 1923.

In accepting the office of Dean of the Colleges for the remainder of the current year Mr. Wilkins has at my suggestion submitted a series of recommendations respecting the Deans already in office in the Colleges, retaining some for full service and others for half service. I recommend that his suggestion that Dean F. J. Miller be released from service with payment of salary as Dean in the Colleges for the remainder of the year be approved. The case is similar to that of Mr. Robertson but involves much less release of duty.

The budget for the year 1922-23 carried with it an appropriation of $5000 as salary for Mr. Lovett. The budget for the current year provides $4000 on two-thirds basis. I recommend that consistently with this arrangement his salary be fixed at the rate of $5000 a year.

equalled in America. In the Celtic language & literature, which is his specialty in the Department of English, he has few competitors, and probably no equal in this country.
OFFICER-INTERESTED IN ENROLLING AND MAJORING IN THE CARE-

after the previous semester, I recommend that the continuation be

story of the accomplishments of the College be carried on for

This is a more detailed version of the College's present status and

I do not believe in receiving the same in return for the beneficence of the

I am in receipt of a letter from the President of the College, dated October 19,

But I am convinced that it is no longer

The college has a capacity of 3000 students, and a faculty of 100 professors. The

approach to 2000 as a result of the

The college has a capacity of 3000 students, and a faculty of 100 professors. The

I recommend that it be no longer

The college has a capacity of 3000 students, and a faculty of 100 professors. The

I am in receipt of a letter from the President of the College, dated October 19,
Rev. C.W. Gilkey,
5600 Woodlawn Ave.,
Chicago, Ill.

My dear Mr. Gilkey:

Herewith please find a copy of Mr. Judd's paper somewhat amplified and correlated which contains what he said (and more) at the recent meeting of the Committee in Instruction and Equipment.

Very truly yours,

[Signature]
Secretary.
Rev. C.W. Gillery,
2500 Wabash Ave.
Chicago, Ill.

Mr. great Mr. Gillery:

Herewith please find a copy of Mr. Jacobs' paper written during the conference which I have studied and which is to be read (and more) at the recent meeting of the Committee.

Very truly yours,

[Signature]
For some years the members of the faculties of the School of Education have been engaged in bringing together the materials necessary for the formulation of certain detailed, scientifically exact courses on specific aspects of education. A decade ago it was the practice of teacher-training institutions in this country to give courses which were very general in their scope and made up chiefly of a recital of the personal experiences and opinions of teachers who had conducted schools. There was no specific body of well-digested information on even such concrete matters as the costs of public education, the regularity of promotions of pupils, or the results of instruction in arithmetic and reading. During recent years the demand for exact information on such topics has become insistent, and the School of Education in common with a small number of other institutions has been a center for its collection. There are now formulated and offered in this School more detailed specific courses of the type described than in any institution in the country.

The time has come when it is entirely safe to say that a clear demonstration has been given of the possibility of scientific studies of education. It will be the task of the next years to round out the present organization in such a way that the scientific methods now applied to certain fields of inquiry shall be extended into all of the aspects of education. In other words, the plans for a complete organization can now be outlined, and the realization of these plans can be made the direct objective of the administration.
For some years the members of the faculty of the

School of Education have been actively in the formulation of a new curricular structure for the

School. The necessity for the formulation of a new curricular structure in the

School is due to the fact that the School is expanding rapidly. In recent years, the number of students has increased significantly, and the School has outgrown its current facilities.

The new curricular structure will include the following:

1. A new department for Teachers Education
2. A new program for Education Administration
3. A new program for Educational Psychology

These changes are necessary to meet the current needs of the School and to prepare the students for the demands of the future.

The faculty is currently working on the development of this new curricular structure and will be presenting the final plan to the Board of Education in the near future.
The basis of a rational plan can not be provision for an accidental student registration. Fortunately, the School of Education has an adequate student body so that considerations of registration need not interfere with concentration of attention on other matters. In the laboratory schools there are waiting lists. The under-graduate courses are overflowing and the graduate registration during the autumn, winter and spring quarters is over 125 while in the summer it reaches more than 600. The student registration is therefore inadequate and plans can be based on the demands of the science itself.

The true basis for the final organization of the School of Education is to be found in a complete survey of the science of education itself. It is evident that there must be courses offered in the various aspects of school administration, there must be courses in educational measurements, in the history of school practices, in methods of instruction, in educational psychology. In short, it is possible to canvas the field and lay out all the lines of inquiry which must be taken up if the schools of this country are to be organized on a basis of fact rather than a basis of tradition or opinion.
The plan of a research plan can not be operationally formulated. For an academic assistant, registration with the School of Education should not be underestimated, as an adequate student body is that commitment of attention and concentration needed. If the student subscribes to the academic year and the graduate student register's balance, the sum is made up to 3.33. The student register that the student's plan can be based on the German of the science itself.

The time plan for the final organization of the School of Education in the 1930s was found to be a complete synonym of the science of education itself. It is evident that there may be a variety of debates on school administration, there must be debates on educational measurement, in education, and on educational practices, in methods of instruction, in education, in pedagogy. In short, it is possible to cause the field and for all the areas of interest which need to taken up. In the school of this community, the plan is arranged on a basis of local interest from a part of the creation of opinion.
PRELIMINARY STATEMENT

Graduate Enrollment

The Department of Education has enrolled in its graduate classes this Autumn somewhat more than 130 fully accredited graduate students. With additional equipment and staff this number will go to 150, where in the judgment of the Department a limit should be set. In the future, candidates for registration in this Department should be required to submit credentials not later than one month before the opening of the quarter, and 150 of the best should be selected.

Salaries of Staff

It will be impossible to secure first rate men on our present salary schedule. Other institutions distinctly outclass us in this matter. Teachers College has no fixed schedule but is paying several of the first rank men $12,000 and is liberal in vacations and exemptions from teaching in favor of research. Several of the State Universities are paying their deans and head professors $8,000 and are appointing very young men. Packer goes this year to Iowa at $6,000 after taking his Ph. D. last June. Neal goes to Missouri from Minnesota at $6,250 after three years of experience since receiving his degree. Professorial salaries are high. Koos of Minnesota was offered by California $7,000 and refused. We offered Works $6,000 and he refused.

Other concrete examples can be supplied.

It is my judgment that an entirely new level of salaries will have to be adopted. We have now four men of the first rank: Bobbitt, Morrison, Freeman, Gray. We have several of the next rank and a number of very promising young men. These men as distinguished
Preliminary Statement

Graduate Employment

The Department of Biophysics has employed in the graduate classes this Autumn somewhat more than 120 newly graduated graduates. With applicant applications and still others applied, the number will go to 150, where in the judgment of the Department a limit should be set. In the future, candidates for admission to this Department should be required to submit credentials not later than one month before the opening of the quarter, and 150 at the latest, should be selected.

Salary of Start

It will be impossible to secure the best men on our present salary scale. Other institutions attract that able minds in paying in their quality. Teachers' College has no fixed salary scale. Part in paying several at the first rank men $1,000 and at $1,500 in vacancies and several of the State universities are paying from $1,500 and northwards. Several of the State universities are paying from $1,500 and northwards. Faculty members from $1,500 and northwards. Faculty members from $1,500 and northwards. Faculty members from $1,500 and northwards.

Other complete examples can be supplied.

It is my judgment that an excellent new level of salary will have to be adopted. We have now 70 men at the first rank, 250 men at the second rank, 300 men at the third rank, and a number of very promising young men. These men as glutinating members
from men in State Universities have to pay an income tax and a number of them now pay insurance under our general plan. The salary schedule cannot in my judgment be held at less than $7,500 for men of the first rank.

**Equipment Needed**

First class men require much better library and laboratory equipment than we now have. The recitation-rooms now available are also inadequate in number for the present program.
from now on I propose that we pay an income tax and a.

Certificate that we pay an insurance under our General Plan.

The salary

for men

require computer in my judgment to pay at least after $100 for men

of the first rank.

Department Headed

First class men deserve more better trip to my report.

The reception Croom we now have the reception Croom how every one.

The correspondence to Trump for the present program.
Outline of Recommendations

Increases in Salary ........................................ $8,550.

Additional funds to supplement types of work now provided for in the College of Education ......................... 2,500.

Additional funds to supplement types of work partially provided for in this year's budget .................................. 7,000.

New Minor Appointments ..................................... 16,770.
New Major Appointments .................................. 30,000.
Additions to Supplies and Equipment ............. 9,000.

Total ....................................................... $73,820.
Outline of Recommendations

$8,500

Increase in Salaries

Additional funds to supplement types
3,500

College of Education

Additional funds to supplement types
1,000

Total's budget for this year
7,000

New Miners Appointments
30,000

New Riders Appointments
2,000

Additional to Supplies and Department

Total $8,500
Details of Increases in Salary
Recommended for Next Year

<table>
<thead>
<tr>
<th>Name</th>
<th>Increase</th>
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<tbody>
<tr>
<td>H. C. Morrison</td>
<td>$500</td>
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<tr>
<td>F. J. Bobbitt</td>
<td>500</td>
</tr>
<tr>
<td>W. S. Gray</td>
<td>500</td>
</tr>
<tr>
<td>F. N. Freeman</td>
<td>500</td>
</tr>
<tr>
<td>E. T. Filbey</td>
<td>250</td>
</tr>
<tr>
<td>G. T. Buswell</td>
<td>250</td>
</tr>
<tr>
<td>K. J. Holzinger</td>
<td>300</td>
</tr>
<tr>
<td>I. N. Edwards</td>
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<td>Alice Temple</td>
<td>250</td>
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<td>Katharine Martin</td>
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<tr>
<td>Grace Storm</td>
<td>200</td>
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<tr>
<td>R. M. Tryon</td>
<td>500</td>
</tr>
<tr>
<td>R. L. Lyman</td>
<td>500</td>
</tr>
<tr>
<td>E. R. Downing</td>
<td>500</td>
</tr>
<tr>
<td>W. G. Whitford</td>
<td>250</td>
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<tr>
<td>Florence Williams</td>
<td>300</td>
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<tr>
<td>Edith rarker</td>
<td>400</td>
</tr>
<tr>
<td>Katherine Blunt</td>
<td>500</td>
</tr>
<tr>
<td>Lydia Roberts</td>
<td>200</td>
</tr>
<tr>
<td>Mabel Trilling</td>
<td>300</td>
</tr>
<tr>
<td>Evelyn Halliday</td>
<td>200</td>
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<tr>
<td>Cora Colburn</td>
<td>300</td>
</tr>
<tr>
<td>Mary Heiner</td>
<td>200</td>
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<td>Lillian Stevenson</td>
<td>200</td>
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<td>Marion Clark</td>
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<td>Ruth Lehman</td>
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Total: $3,550.
<table>
<thead>
<tr>
<th>Name</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Neil Miller</td>
<td>$800</td>
</tr>
<tr>
<td>E. L. Robertson</td>
<td>$800</td>
</tr>
<tr>
<td>W. E. Gray</td>
<td>$800</td>
</tr>
<tr>
<td>C. N. Freeman</td>
<td>$800</td>
</tr>
<tr>
<td>L. T. Tallman</td>
<td>$500</td>
</tr>
<tr>
<td>G. T. Brownell</td>
<td>$600</td>
</tr>
<tr>
<td>L. A. Holshay</td>
<td>$200</td>
</tr>
<tr>
<td>J. M. Kavanagh</td>
<td>$500</td>
</tr>
<tr>
<td>Alice Temple</td>
<td>$500</td>
</tr>
<tr>
<td>Katherine Metcalf</td>
<td>$300</td>
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<tr>
<td>Grace Strong</td>
<td>$300</td>
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<tr>
<td>R. M. Tyson</td>
<td>$200</td>
</tr>
<tr>
<td>R. L. Jammie</td>
<td>$200</td>
</tr>
<tr>
<td>E. R. Downie</td>
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<tr>
<td>W. G. Wilfong</td>
<td>$200</td>
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<tr>
<td>Florence Williams</td>
<td>$300</td>
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<tr>
<td>W. F. Parker</td>
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</tr>
<tr>
<td>Katherine Blunt</td>
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<tr>
<td>Lyle Hayman</td>
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<tr>
<td>Medal Tilling</td>
<td>$500</td>
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<tr>
<td>E. F. Hallyday</td>
<td>$500</td>
</tr>
<tr>
<td>Coe Culpin</td>
<td>$500</td>
</tr>
<tr>
<td>Wm. Heizer</td>
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<tr>
<td>T. H. Stimson</td>
<td>$500</td>
</tr>
<tr>
<td>M. J. Oller</td>
<td>$500</td>
</tr>
<tr>
<td>Ruth Leman</td>
<td>$500</td>
</tr>
</tbody>
</table>

Total: $8,500
Details of Additional Funds in the College of Education for part-time teaching in Special Departments

Methods of Teaching History ........ $500.
Methods of Teaching English ........ 500.
Methods in Mathematics .............. 500.
Art Education ....................... 500.
Geography .......................... 500.

T O T A L ........ $2,500.
<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
<tr>
<td>Methods of Teaching History</td>
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</tr>
<tr>
<td>Methods of Teaching English</td>
<td>200</td>
</tr>
<tr>
<td>Methods in Mathematics</td>
<td>200</td>
</tr>
<tr>
<td>Art Education</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$800</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$800</strong></td>
</tr>
</tbody>
</table>
Details of Additions to Funds Provided in Present Budget for Graduate Department of Education

Major appointment in School Administration,
for which $6,000 is now provided .... $1,500.

Assistant professorial appointment in School Administration for which
$3,500 is now provided ......... 2,500.

Mrs. Reed withdraws. Increase to major appointment .......... 3,000.

T O T A L .......... $7,000.
Department of Agriculture for Funds

Provided in Revised Budget for

Grants Department of Education

Salary Appointment in School Administration

$1,000 to now providing

Assistant Principal appointment to which

$5,000 to now providing

MT. Rees with increase to

$2,000

Salary Appointment

$1,000

J.A.T.O.T.
Details of New Minor Appointments

Instructor for High School Methods .... $2,400.
Instructor for Introduction to Education ....................... 2,400.
Assistant Professor for Tests and Measurements .................. 3,500.
Assistant Librarian for School Documents 1,650.
Asst. Librarian for Text-book Library ... 1,650.
Asst. Librarian for Reserve and Reference Library ................ 1,650.
Secretary for Mimeographing .................. 1,320.
Laboratory Assistant and Special Assistant for Tests in Laboratory School ............. 2,200.

TOTAL ............. $16,770.
<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor for High School Methods</td>
<td>$3,400</td>
</tr>
<tr>
<td>Instructor for Introduction to Education</td>
<td></td>
</tr>
<tr>
<td>Assistant Professor for Teaching and Testing</td>
<td>$4,000</td>
</tr>
<tr>
<td>Measurement for School Documents</td>
<td>$650</td>
</tr>
<tr>
<td>Assistant Librarian for Text-Book Library</td>
<td>$1,600</td>
</tr>
<tr>
<td>Assistant Librarian for Reserve and Reference Library</td>
<td>$1,500</td>
</tr>
<tr>
<td>Secretary for Microcomputer</td>
<td>$1,300</td>
</tr>
<tr>
<td>Laboratory Assistant and Specialist</td>
<td>$3,000</td>
</tr>
<tr>
<td>Laboratory Assistant in Testing</td>
<td>$1,700</td>
</tr>
</tbody>
</table>

**Total:** $14,550
Details of New Major Appointments

Professor of High School Administration .. $7,000.

Professor of School Administration to deal with personnel problems .......... 8,000.

Professor of Administration of Higher Institutions ......................... 7,500.

Professor to deal with problems of physical development and physical conditions of pupils (man with medical training) ....................... 7,500.

TOTAL ................. $ 30,000.
Details of New Appointments

Professor of High School Administration...

Professor of Secondary Administration...

Geel with Personal Programme...

Professor of Administration...

Higher Administration...

Professor to deal with problems of...

Development and Divergent...

Chairman of University (man with...

Medical Training...

¥ 30,000
Additional Supplies and Equipment
to Correspond to Increases in Staff .... $9,000.
Additional Supplies and Equipment

$6,000.00
Buildings

The present equipment is inadequate, and plans should be made for three new buildings.

Details on Buildings

The buildings needed to carry on the proposed program of the School of Education are three in number:

I  A graduate building
II  A high school building
III  A gymnasium and refectory

Detailed specifications for these buildings are as follows:

(I) The graduate building should be located on the east side of Kimbark Avenue between Blaine and Belfield Halls. On the ground floor it should have a large library to store the education library. There should be provided also three special libraries; one for reports and special materials not in book form; one for reserve material; and one for a collection of text-books. There should be suitable work-rooms for the librarian. On the same level as the library and extending east into the court and occupying the space now occupied by the temporary gymnasium, should be an auditorium large enough to seat 700 people. This should open into the library so that it can be used at times as a reading-room.

On the second floor should be four graduate recitation rooms.

On the third floor should be a series of laboratory rooms for instruction in statistics and laboratory courses in educational psychology. Some testing-rooms should also be provided.
The present department is inadequate and plans should be made for three new buildings.

Details of buildings

The buildings needed to carry on the proposed program:

1. A graduate building
2. A high school building
3. A gymnasium and recreation

Details of specifications for these buildings, etc. as follows:

The graduate building should be located on the east side of Kimball Avenue between 36th and 37th Streets.

The high school should have a large library to house the collection.

Importantly, there should be provision for three special libraries.

There should be provision for office space and special materials not in draft form.

The basement should have a collection of text-books.

The main level should have a multi-purpose work-room for the library.

On the same level should be the library and extending east into the court and occupying the space now occupied by the temporary gymnasium should be an auditorium.

Take money to seat 400 people. This should open into the library.

On the second floor should be a gymnasium.

On the third floor should be a series of laboratories.

Rooms for instruction in statistics and laboratories concerning education psychology. Some testing-rooms, etc. also provided.
On the fourth floor should be offices.

(II) A high school building should face east on Kenwood Avenue between Blaine and Belfield Halls, and should provide in four stories, together with the rooms now available in Belfield Hall, quarters for a high school of 700 pupils.

(III) A gymnasium and refectory should be built on the east side of Kenwood Avenue for the laboratory schools. It should connect with the present quadrangle by means of a tunnel under Kenwood Avenue. It should be a long one-story building opening on the east side on to Jackman Field.

This plan contemplates the removal of the Boys Club, Kimbark Hall, and the temporary gymnasium. Some changes would need to be made also in Blaine and Belfield in the way of readjustment of partitions.
On the fourth floor spring to office.

A high school window shows face east on Kenwood Avenue between plates and pellite hall, and showing presence in town, together with the room now available.

In Pellegrini Hall, designated for a high school of 300 pupils.

A dormitory and reception room shall be built on the east side of Kenwood Avenue for the preparatory section. It shall connect with the present building by means of a tunnel under Kenwood Avenue. It should be a long one-story building.

This plan completes the remnant of the plan, Crisp Memorial Hall and the temporary dormitory. Some changes would need to be made in plates and pellite in the way of treatment of partition.
BRIEF JUSTIFICATION OF ITEMS

Item: Increases in Salary.

The preliminary statement gives in general the justification for this general effort to raise the level of all salaries. Each item here set down represents an effort to retain a person whose contribution is conspicuous either to research, teaching, administration or some combination of these items.

Item: Additions to Funds in the College Budget.

The undergraduate elections are this year such as to justify these recommendations. It is the hope of the College that it may ultimately limit its registration at about 400 undergraduates. In case that limit is reached, there will have to be some further additions in the future. The present recommendations provide merely for some extra divisions now needed.

Item: Additions to Funds in the Graduate Budget.

These are recommended because it seems impossible to get men of the right kind with the funds now available. It is recommended that we once more invite Work and Butterworth at the new figures.

In seeking a man for Mrs. Reed’s work, it will be necessary to pay more than we pay her.

Item: New Minor Appointments

These recommendations provide for division or undergraduate work and for library needs.

The last item furnishes a means of organizing the scientific work which is done cooperatively by the graduate department and the laboratory schools.
BRING JUDICATORY OF ITEMS.

INCREASE IN SALARY.

The preliminary statement gives in general the
intention for the general effect to raise the level of all
salaries. Each item here set down represents an effort to reach
a person whose contribution is comparable to that of these items.
Teaching, administrative or some combination of these items.

Affiliation to Funds in the College Budget.

The undergraduate election gives this year some as to
faculty free recommendations. It is the hope of the College that
may unmistakably limit the registration of about 400 undergraduates.
In case that limit is reached, there will have to be some further
affiliations in the future. The present recommendations probably mean
for some extra divisions now needed.

Affiliation to Funds in the Graduate Budget.

These recommendations because it seems impossible to
get men of the right kind with the funds now available. It is
recommendation that we once more invite more and better work of the
new students.

In seeking a man for new 'Keeh's work,' it will be
necessary to pay more than we pay per.

New Minor Appointments.

These recommendations prove for division or number.
Graduate work and for importance needed.
The last item furnishes a means of organizing the
scientific work which is gone cooperatively by the Graduate Council.
... and the Harrow Report...
Item: **New Major Appointments**

The justification for these recommendations is to be found in the fact that a fully rounded treatment of the science of education demands these major lines of work.

Items: **Equipment and Buildings**

These depend for their justification in part on the expectation that new members of the staff will require room and working material, in part on present crowded conditions.
January 8, 1924.

Mr. C.R. Holden:

My dear Mr. Holden:

The following matters have been referred to the Committee on Instruction and Equipment for consideration and report or for action. They have not been finally disposed of as yet. The matters are arranged in chronological order and not in the order of importance or in the order for early decision.

June 21, 1921: Patenting the results of laboratory research. Refer to Finance and Investment and Instruction and Equipment jointly for consideration and report. July 12, 1921, Lemen patent also referred to these committees. March 13, 1922, Mr. Holden reported progress.

January 9, 1923: Senate's report on scientific research. Referred to committee for consideration and report.

May 8, 1923: Request to Spelman Rockefeller Memorial. Referred with power to make the request if approved and to proceed with project as far as funds are available.


July 12, 1923: Profits on Commons. Referred to committee with power to advise the president and to report to Board.

July 17, 1923: Medical Examination of Employees. Referred to Committee on Health and Sanitation for report.

December 13, 1923: Institute of Paleobotany. Referred to committee to determine the form of organization and the name.
Mr. C.R. Holden -2-

January 8, 1924.

December 13, 1923: Carnegie Corporation Library School. Referred for consideration and report.


December 13, 1923: University College, Development of. Referred for consideration and report.

Very truly yours,

The following matters have been referred to the Committee on Instruction and Equipment for consideration and report or for action. They have not been finally disposed of as yet. The matters are arranged in chronological order and not in the order of importance or in the order for early decision.

June 21, 1921: Patenting the results of laboratory research. Refer to Finance and Investment and Instruction and Equipment jointly for consideration and report. July 12, 1921, Lemon patent also referred to these committees. March 13, 1922, Mr. Holden reported progress.

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July 17, 1923: Medical Examination of Employees. Referred to Committee on Health and Sanitation for report.

December 13, 1923: Institute of Paleobotany. Referred to committee to determine the form of organization and the name.
GENERAL RECOMMENDATIONS APPLYING TO ALL DEPARTMENTS.

INSTRUCTION

I believe that the University statute requiring two major courses of instruction per quarter from each instructor is an equitable one for the laboratory science departments, provided suitable arrangements for research, assistance and service are made. I would suggest that in the interpretation of the statute the question of laboratory instruction versus class room work be put on the following basis:

"Two hours of laboratory work shall be considered the equivalent of one hour of class room work, but fifteen stated hours of instruction per week shall be considered the maximum possible requirement under this rule." That is, an instructor giving wholly laboratory instruction shall not be asked to give more than 15 hours of such instruction per week in order to comply with the statute. Similarly, an instructor giving a course of two or three lectures a week and laboratory work to two sections for six hours each shall be considered to have complied with the statute. A division of a class into sections requires, of course, the consent of the Dean, and would only be allowed for classes large enough to warrant a division.

The purpose of the above suggestion is to protect
DISCUSSION

I propose that the University's emphasis on the development of a coherent and comprehensive information system for the University's needs should be expanded to include the integration of technological and software systems. This is necessary to maintain the integrity of the information and to ensure its accessibility and security.

In the following pages, the following points will be addressed:

1. The implementation of an information management system that is compatible with the existing infrastructure.
2. The development of a comprehensive strategy for the management and protection of information assets.
3. The integration of information systems with the University's strategic goals.
4. The role of information technology in the University's decision-making process.

The purpose of this paper is to provide an overview of the current state of information management at the University, and to make recommendations for future development.
instructors against the working of the "two to one" rule where a very large amount of laboratory instruction is involved. Laboratory instruction is exhausting, and in some ways more of a tax than classroom work, as the instructor is the target for innumerable diverse questions in the individual instruction given. To go beyond the recommended maximum of three hours per day for the five days would be a real hardship, taxing the time and vitality of instructors to an extent that would prevent development in research and study for the rest of the day.

For the same reason, the request for more than 2 majors of work per quarter, as permitted under the form of contract made with instructors, would work a hardship in laboratory courses. The only department averaging above 2 majors per instructor per quarter is Chemistry, where the excess has accrued spontaneously, for the sake of the development of the department.

A reduction from the two-major requirement may, of course, be made by special agreement with the President. Such a reduction may be desirable in certain cases for a number of reasons: the particular importance of an instructor's research work, the wish to allow a younger man to develop as an investigator, author, etc.; but all such arrangements should be specifically approved by the President, or, at his wish, by the Dean of the Faculties,
The image contains a handwritten page of text. The text is not legible enough to transcribe accurately. It appears to be a page from a document, but the content is not clear enough to provide a meaningful representation.
and should not be a matter of private arrangement in a department, as it seems to be at present.

It is practically inevitable that in a number of graduate courses, necessary for a rounded course of preparation of advanced men, there should be a very low registration—often as low as 1 to 3 students. Sometimes there will be no registrations. The Department of Chemistry has for many years met the need of such courses in a very economical way in the case of laboratory courses: from two to nine laboratory courses are offered simultaneously in a single room as a single course, or as two courses, as far as the work of the instructor is concerned. Thus, Dr. Nef offers three successive majors of advanced preparation work (courses 35, 36, 37) simultaneously every quarter, as a single course. There may be no registration in a given quarter in a given one of these courses, but the total registration is on the average a very respectable one for such advanced work. Miss Barnard offers, with a $400 assistant, nine simultaneous courses every quarter, with a total registration averaging 35 to 40 per quarter. With the assistant 30 hours of instruction are offered, 15 hours for each, and we count the work as two majors for Miss Barnard. This method is not only economical but it also has the great advantage for the department that a student can begin the work any quarter, and can continue it in any
way suiting his work; with the result that there is a minimum of loss through the drifting away of students as a result of interrupted or postponed work. Anatomy gives its dissection courses in the same way. I am emphasizing this arrangement because it might be duplicated with advantage in other departments, whenever equipment and material make such an arrangement possible. In these courses no lectures are given, as a rule, but there is a good deal of required reading, indicated in the instructions, and individual discussion with the instructor.

RESEARCH INSTRUCTION

In the early days of the University when Ph.D. candidates were few in number, it became the custom to consider research courses of instruction as special, voluntary courses, not counted in the "two-major" rule. At that time no hardship was involved in the custom, as one or two research students, properly directed, are really an aid rather than a handicap in the development of an investigator's own field. That is true to-day as well, and it is recommended that research courses running through three quarters and given to an average of one or two research students per quarter be considered voluntary courses, outside of the two-major requirement. In the majority of cases, such work will accelerate a young
may influence his work, with the result that he starts a minute
of face applauding the galleries, much to the annoyance of a
nearly

If the speaker's oral communication is loud, he may
teach his audience to understand even when he

Gnomonics, it is to be hoped, may be of
importance in the education of the

The speaker in my letter gives a summary of the

In the end, we may conclude that

any team or any group can achieve significant

research results by doing so. This

conclude by saying that the authors presented a

motivational aspect of course work with excellent a


instructor's becoming more widely known; it is a positive advantage to him; and the University through its standing does much to supply him with such students.

On the other hand, with the great growth in the number of Ph.D. candidates in several departments, working under one or two instructors, their instruction has become a very great, though necessary, burden rather than a help to the instructor, a burden more necessary for the University than for the individual instructor. It is therefore recommended that instructors who have an average of four research students per quarter of residence to look after, be allowed to count such research instruction as one-third of the work required by the University; i.e., as two majors of the six required for the year. In lieu of this privilege, by arrangement with the President, the instructor may (not shall) be granted a research assistant, and he shall then be held to give the ordinary six majors of instruction per year. This, of course, does not preclude in any way special arrangements with the President; but it shall be considered the normal arrangement, deviation from which should require the consent of the President. The present practice deviates far from this rule.

For intermediate cases, involving two or three research students per quarter, similar adjustments would easily be made, such as an allowance of one major per year.
Such a plan has met with the approval of heads of departments. It should not involve the University in any particular extra expense on the whole, but would involve readjustment of courses and staff in a number of instances, as will be shown in the specific recommendations concerning departments. Such an arrangement is considered necessary to provide for the growing numbers of Ph.D. candidates in these departments in a way equitable to the University and to its staff.

LABORATORY ASSISTANTS

There are two or three fundamentally different ways in which courses requiring laboratory assistants may be offered. For instance, a department may offer courses to classes ranging from fifty to over a hundred, as we do in chemistry, and have the laboratory work done under the direction of a professor or instructor with the assistance of a great many minor assistants. Such a method has the advantage that each student is under a man of advanced rank and receives the benefit of the inspiration and broadness of view of such a man. A second method, such as is observed in physics, limits sections to 30 students. The department is naturally unable to multiply professors at a rate to take care of numerous sections, and hence a good proportion of the sections are left altogether in the hands
In your plan you may also apply the principle of

 germane material. To apply not advancing the categorization in
different categories. Only when external awareness and the ability to
innovate considerably comes may still be shown in the specialty and the
categorization of knowledge and knowledge is something to
necessary to obtain in the simple example of a

innovation in these categories in a very satisfactory to the

innovation may to the extent

STATIONARY ELECTRICITY

There are 100,231 and 333 and 001 and 999 different ways
in which some 100231 learning participation sequences may be
affected. For instance, a generated may occur sometime
to escape having formed which to have a periodic and so on in

as above, we may also append further examples of a hypothesis on learning with the essential

of a clear and valid explanation. Such a method may also

understand and apply to include a way of acquiring

only may account for the parts of the representation of the

year of view of each a part. A second method, such as to
openly in practice, imply assertion of 30 statements of the
government in majority measures to multiply proportions of

take to take care of importance sensation and resume a book

presentation of the sensation are first situations in the name
of younger, though efficient, men and younger laboratory assistants, and the students get none of the vital element of personal contact with the best men in the department. The method has the advantages of smaller units of instruction, which balance nicely the disadvantage. Dissecting is offered in still another way, a group of instructors taking charge together of classes of eighty to over a hundred students, without using any younger assistants at all. All of these methods are legitimate and successful methods of coping with the problem of laboratory instruction, and it is desirable that the University should allow and even encourage such variation, enabling each department to solve its own problems of instruction in the way it finds works best. The question of expense will not enter to any great extent into the matter of choice between the three methods, provided the University regulation of two majors of full work per quarter per instructor be lived up to, and provided departments are allowed, roughly, amounts for laboratory assistants and instruction estimated on a common basis. Then the exact form in which they employ these amounts, as long as they are employed efficiently, and with good results in instruction, is a matter of no moment to the University. One department, such as Chemistry, may distribute the amount among numerous minor assistants; another, like Anatomy, may concentrate it for its specific needs in a few men.
As a study of the efficient use of appropriations, I have made estimates on the following basis:

1. Each instructor of the rank of instructor or higher is supposed to give two courses per quarter and, where numbers permit it, to classes of 30 students. For smaller classes a single instructor should do. Instructors used beyond this requirement are considered to be really doing the work of assistants, possibly economically by concentration in a single man of the work of several minor assistants; but the total expense of such men, beyond that required for classes as indicated, has been charged by me to "Laboratory Assistants".

2. For laboratory classes numbering more than 15 students, $50 should be allowed for a laboratory assistant for every 12 to 13 students for 6 hours of laboratory instruction (and notebook correction) per week.

3. For laboratory classes numbering more than 30 students, there should be an additional allowance of $120 for an excess of 30 students (i.e. for a class of 60), and of $160 for an excess of 50 students (i.e. for a class of 80), to provide for proper supervising assistants of better grade.

These amounts were arrived at by taking the pay of graduate student assistants ($40 to $50 for 6 hours a week) for the lowest class of assistants, and by taking the proportion of an associate's or instructor's salary for the time required for the supervising of the large classes.
...
On the basis of (1), (2) and (3) the work of the departments was studied for the four quarters of 1912-13. The registration in each course given was secured, sufficient of the staff allowed for instruction on a liberal scale; and the balance of the staff, calculated on the basis of the two-major-per-quarter rule, was considered as belonging to "laboratory assistance", and the corresponding cost in salaries charged against laboratory assistance. Estimates were then made of the amounts that should have been allowed for laboratory assistance on the same basis, proper deductions being made for fellows and scholars assigned to the various departments.

The estimates and comparisons thus made show a number of interesting and important results. For instance, for the departments of Physics and Anatomy the amounts estimated tallied practically exactly with the amounts allowed by the University; for the department of Chemistry, the largest and probably most economical of the departments, the amount estimated was a little higher than that actually allowed, but still close to the limit of a correct relation between appropriation and application. It is an interesting fact that these three departments have extremely widely varying methods of handling their laboratory work, but they are all three thoroughly well organized as to instruction, assistance, and particularly also as to service.
On the other hand, the work of the government is essential for the functioning of the economy.

The government's role in economic stabilization cannot be underestimated. It is crucial to ensure a stable inflation rate and to maintain the currency's value.

Economic policies aim to promote growth, reduce unemployment, and maintain price stability. The government plays a key role in the allocation of resources, ensuring that the economy functions efficiently.

In conclusion, economic policies are critical for the smooth functioning of the economy and the well-being of its citizens.
In nearly all of the other departments there are, as a rule, considerable deviations, and in one instance, Botany, a very great one, between appropriations and estimated allowance, and all in the direction of too large appropriations for instruction and assistance. These same departments are very poorly equipped with service; high-priced men are used to do work that should be done by lower-priced service employees. It is for such departments that readjustments towards a gradual transfer from the instruction to the service budget are recommended. The advantages of such changes have already been referred to, and are cordially endorsed by the heads of departments. The excess of appropriation does not mean therefore entirely wasted, but rather misapplied, money, in a large measure. In one case, Botany, the discrepancy is so great, however, that even after due provision for service there will be ample staff to make a decided saving in Summer Quarter appropriations by the University possible and advisable. In the case of Zoology a similar saving, to a lesser degree, however, is recommended.

It is recommended, as a result of this study, that, for normal working conditions, the allowance to departments for laboratory assistance in future be estimated on the basis of the above rules (1), (2) and (3), as soon as the readjustments between "assistance" and "service" have been made in the departments in which the service is as yet inadequately
organized. The same basis would serve well for special appropriations asked for to take care of unexpectedly large registrations in laboratory courses and also for special appropriations for the summer quarter work. It is not intended to work any such system too closely; a fair margin will be allowed; as it is recognized that there must be ample room for development and growth. But some such method will give all the departments an equal chance for development, and also demand an equal degree of efficiency.

It is further recommended that the exact manner in which such allowances for laboratory assistance are used shall not be prescribed, as long as efficient instruction is given. That is, Anatomy may continue to concentrate its funds in a few high-priced men, Chemistry may use its funds for a large number of minor assistants. It is recommended, however, that in the employment of definite grades of men departments adhere fairly well to the following schedule:

I. Undergraduate assistants shall receive $40 per quarter (the equivalent of a scholarship) for 6 hours of laboratory assisting and the reading of about 12 notebooks of students under their care.

II. Graduate assistants, appointed for one quarter only and not as staff members, are to receive from $40 to $66.67 for the same service, according to the degree of responsibility imposed.
...
The University would thus supply the research assistant at a present cost of $400 or $500, and at a final cost, say at the end of three years, of $700 or $800. This is the only increase in appropriation recommended in this report: ultimate reductions in other departments more than offset it.
III. Departments should try the experiment of appointing staff assistants, to receive $300, free tuition, and laboratory fees and material (within reason; a limit of $25 per quarter is used in Chemistry) for 9 hours of laboratory assistance per week for three quarters. The total service may be distributed unevenly in the three quarters at the convenience of the department (a number of departments have a huge class in only a single quarter). Such assistants receive in cash, tuition, etc., the equivalent of a first-class fellowship ($500). The amount of work is somewhat greater than required of fellows. The positions will enable departments to strengthen their staff of assistants after the award of fellowships has been exhausted, with men of the same caliber. They are good assistants, and tend to strengthen the Ph.D. work of departments.

IV. Where larger amounts are paid to such assistants, there shall be a proportional increase in time of service demanded. For instance, a $600 assistant shall be expected to give 15 hours (the maximum) of service, excepting by explicit arrangements approved by the President, when it is desired to secure an unusually good man.

V. Assistants paid $800 to $1,000 shall have the rank of Associate (at least), and be subject to the general University statute concerning instructors.
VI. It is hardly necessary to point out that
departments are expected not to bid against each other for
men.
departments. It includes a collector and a preparator, at a cost of $1900. With 427 majors of laboratory work, the per major cost of service is $4.50, comparable with $3.70 in Chemistry and $6.60 in Physics.

V. The Summer Quarter.

The Summer Quarter arrangements of the department impress me as its weakest feature. It required a special appropriation of $2046, and used $1367 of the time of the regular staff, a total of $3413 for 204 minors of work, netting roughly $1200. While it is not assumed that the net return should pay for the summer instruction offered – as it happened to do in the Chemistry Department in 1912 – still the ratio of 1/3 seems far too low. This is particularly so in the face of two items of the special appropriation: $400 for Dr. Strong for one term’s work (double work) for 16 students – a class of 6 and one of 10; and $333 for Professor Child for 2 students, as far as I can see! Dr. Anderson, in Chemistry, of the same rank as Strong, received $500 for three majors in the quarter with an attendance of 105 student majors!

VI. Recommendations.

In view of the fact that the regular instruction of the department is below the amount required by the University statute, and that there is no shortage of laboratory assistance or service, it is thought that the regular staff can cover the summer quarter work more completely with a very considerable saving to the University. Otherwise the department appears to be splendidly organized.
ANATOMY

I. Instruction.

Except for Professors Bensley and Herrick, the staff of the department appears to be doing full work in instruction as required by the University statute. The work of the two professors in question is of so highly specialized a character and the difficulty of holding graduate students in the face of the temptation to engage in medical practice is so great, that the shortage appears to be inevitable. No doubt the gentlemen are doing in research and organization of work more than enough to make good the formal shortage.

II. Research Instruction.

For the reasons just given it is difficult to hold research students. The average per quarter appears to be 1.

III. Laboratory Assistance.

Allowed: $2767 (this includes a good portion of the salaries of "instructors", as explained in my introductory remarks.)

Estimate of proper allowance: $2100.

A part or all of the difference appropriated has been turned back by Professor Bensley. The laboratory assistant question seems to be very wisely and economically managed in the department. As a consequence of the seductiveness of medical practice, it is necessary to employ high-priced men only. This has been done in so admirable a manner that the total cost is practically no greater than a greater number
of cheaper assistants would have demanded.

IV. Service.

The total appropriation of $2400 is for 873 majors of work at the rate of $2.75 per major, representing wise distribution. No doubt the large amount of work done in dissecting, with immovable material, is largely useful in this showing, which is an excellent one.

V. The Summer Quarter.

The special appropriations of $850 and $667 of regular time of the staff made a total of $1517 used. The attendance (about 64 minors of work) was very light indeed, the ratio of expense to return being about 4 to 1. It is thought that a reduction in this expense can well be made by combining more courses under a single instructor in the manner discussed in the introductory remarks.

VI. Recommendations.

A recommendation concerning a reduction in the expense of the summer quarter is given in V.
The report on the operation of 1940 is for the category of reports on the state of the nation.

The committee, with immeasurable effort, is presented with a difficult task.

We refer to the committee's report.

The committee presents a report concerning the expansion of the nation.

We refer to the annexed report.
PHYSIOLOGY AND PHYSIOLOGICAL CHEMISTRY.

I. Instruction.

In Physiology the ratio of major courses to instructor per quarter is only 1.3 - an unusually low value. Professor Carlson and Professor Lingle are doing full work, but the remainder of the instructional staff represents too large a force for instruction and assistance. On the other hand, the service is inadequate and much work that should be done by preparators is done by high-priced instructors, accounting for the low ratio exhibited. A complete, though gradual, reorganization of the department seems advisable, as recommended below under VI - recommendations which Professor Carlson has endorsed in general.

In Physiological Chemistry there is a similar disproportionate distribution in instruction staff and service, with the result that instructors are doing service work, which does not show in the record of courses and which represents an extravagant waste of ability to do a higher grade of work. Dr. Koch, for instance, is considered to be in residence this quarter, although offering no courses! I do not know whether this arrangement was made with the approval of the President or Dean. An excess of drudgery in the autumn quarter would seem to justify such an arrangement, but it should be made with the explicit approval of the President or Dean. The whole organization is bad, however, and recommendations for changes are made in VI.
At the beginning of the conversation, I asked about the availability of the system, and the person replied that they were waiting for the system to be ready. I then asked if there were any other systems they were interested in, and they mentioned a few. We then discussed the features of each system and what they were looking for in a system. Finally, I asked if they had any questions, and they replied that they were satisfied with the discussion so far.
below - changes which Professor Mathews heartily endorses.

II. Research Instruction.

The research instruction of the department is very heavy and important, averaging 7 students in Physiological Chemistry and Pharmacology per quarter, and 8 per quarter in Physiology. Provision for the former has been made by the appointment of a $1222 assistant to Professor Mathews. In the reorganization of the department some of the assistance funds should be used for a similar research assistant for Dr. Carlson.

III. Laboratory Assistance.

Allowed: Physiology: $3250.

Estimate of proper allowance: $650. The great discrepancy indicates that a good portion of this amount should be transferred to service and research assistance.

Allowed: Physiological Chemistry and Pharmacology: $2200.

Estimate of proper allowance: $450. Here again the great discrepancy indicates the need of a transfer of funds from so-called "instruction" to service, protecting the staff against service calls.

IV. Service.

The service of the department is inadequate. It includes a mechanician, an animal keeper, a boy store-keeper and a man storekeeper, a total of $2520 for 572 laboratory majors of work, a ratio of $4.35 per major.
The extract of information on the government is not

available. The 1933 case study of President

Kapetsky reveals an important analysis of the

government's influence over the economy and

political systems. The inaccuracy and unavailability

of the data made the presentation of the case study

unreliable. The government, in its role as the

enforcement agency, is not able to provide a

reliable analysis of the situation. The

inconsistencies and inaccuracies in the data

make it difficult to present a clear picture of the

situation.
While this represents a reasonably high ratio, it is put in good part into sources which are not available for much service in the actual running of courses. The organization of the department would be much improved by using a part of the excess of funds for assistance in instruction for a preparator and for a higher grade storekeeper and curator combined.

V. The Summer Quarter.

With a special appropriation of $1100 for instruction and laboratory assistance, and using $884 of the time of the regular staff, the department had 266 minors of work done during the summer. This represents roughly $1600, or 80% of the summer quarter cost of the department, a very excellent showing, which indicates that the special appropriation is not excessive.

VI. Recommendations.

For the reasons developed under I-IV the following reorganization of the work of the department is recommended for consideration:

1) A preparator should be appointed in place of part of the present staff of assistants and instructors. His salary could be $900, the same as in Zoology (Adams), and he should have charge of the preparation of material, etc., for all the courses of instruction (Lingle, Carlson, Mathews, etc.), with the aid, if necessary, of the storekeeper discussed in 2).
White rice production is increasing, which is to be expected for many reasons. Such as the increasing population of the country, the increased availability of government money to support the growth of the economy, and the increased demand for rice, which is a staple in many parts of the world. For these reasons, it is not surprising to see an increase in the production of rice in India.

In the next chapter, we will discuss the factors that contribute to the increase in rice production and the challenges that need to be addressed to sustain this growth.

IV. Recommendation

It is recommended that the work of the department be recommenced for the following reasons:

- The amount of data on rice production and consumption is crucial.
- The current state of rice production and consumption is necessary.
- The amount of rice produced in 2010 is not satisfactory.
- The amount of rice produced in 2011 is satisfactory.

The department of rice production (Ghizer, Gilgit, Hunza) should be increased in its capacity and efficiency to meet the needs of the growing population.
2) A single storekeeper for the whole department (Physiology, Physiological Chemistry and Pharmacology) should be employed in a single storeroom, as in Kent, if the four floors can possibly be served in such a way. That would enable the storeroom to be open all the time to all the students, instead of as now, part of the time only, and then only to part of the students.

3) Part of the excess of assistants (see III) should be set aside for a research assistant for Professor Carlson, or he should be allowed to offer only 4 majors of stated courses per year, aside from his research instruction. The former arrangement would be preferable.

4) While the budgets of the two divisions of the department in regard to service and equipment and supplies may remain as separate accounts, it is recommended that the business management of the whole department be placed in the hands of a single man: for instance, Dr. Koch, an arrangement which would suit both Professor Mathews and Professor Carlson. Dr. Koch would then have the management of all orders, supplies, equipment, apparatus, etc.

5) The recommendations as to staff and instructing assistants in the department should remain, as at present, separated, in the hands of Professor Mathews for Physiological Chemistry, and of Professor Carlson for Physiology.

Both Professor Mathews and Professor Carlson think that the suggested reorganization would add very greatly to the
efficiency and comfort of work in the department. It should be economical, but the recommendation involves no present reduction of total appropriations, simply a readjustment. The present appropriations for laboratory instruction are out of all proportion to the needs for instruction, but instructors are burdened with service, and the management of the department is altogether unbusinesslike.
BOTANY

The Department of Botany, even more than Physiology, is altogether out of line with the statute of the University requiring 2 majors of work per quarter per instructor, in part because it has an altogether inadequate service. Recommendations, which have already met with Professor Coulter's approval, will be made below in VI, after the detailed discussion of the situation in the department.

I. Instruction.

For the staff of professorial and instructor's rank (not counting a host of assistants discussed under III) the average of 1.3 (!) course per quarter of residence per instructor was maintained for the year 1912-13, in place of the statute requirement of 2 majors. Instructors have been burdened with duties which could be assigned much more economically to service appointees.

II. Research Instruction.

The department has been very strong in research instruction, averaging about 14 research students per quarter, which places it only after Chemistry, and close to that department in this important respect. The burden of the work is so great that specific provision should be made for it, and it is recommended below that in the rearrangement of the work Professor Coulter be allowed half the time of Professor Chamberlain for joint direction of research
The Department of Psychology, as more than before, is
interested in the attitude of the University toward
the psychology major. The department is aware that
many faculty members have expressed concern over
the current situation, perhaps due to the perceived
importance of psychology in today's world. The
department is eager to understand the perspective
of the faculty on this matter.

Information

For the sake of transparency and accountability,
the department is determining a plan to facilitate faculty
input into the curriculum for the psychology major. This
involves gathering feedback and opinions from various
faculty members to ensure a comprehensive approach.

II. Recommendation

The department has conducted extensive
research and analysis to recommend
changes to the current curriculum. It is
encouraged that the faculty engage in
this important task. The purpose of
this recommendation is to enhance the
quality of education and prepare students
for a wide range of careers. It is hoped that
the department's efforts will lead to
improved teaching and learning experiences.
(requiring of Professor Chamberlain only one other course per quarter; this being equivalent to an appropriation of say $1250 for a research assistant for Professor Coulter). It is also desirable to allow Professor Crocker to consider his research courses in three quarters equivalent to at least 2 regular majors, or to assign him out of the present funds of the department $1,000 for a research assistant, preferably the former.

III. Laboratory Assistance.

Allowed: $4750, besides Fellows and Scholars.

Estimate of proper allowance: $820 (!).

This glaring discrepancy between the two amounts is in part the result of a correspondingly small appropriation for service and for research instruction. Still the excess, together with the excess in staff, will justify a decided reduction by way of summer quarter appropriations (see below).

IV. Service.

The service in the department is entirely inadequate for the needs of a large department. It has only $960 for a gardener. It should have a collector ($900) and a Curator-preparator" at $900 to $1,000, funds for whom should be transferred from instruction account to service account. The advantages of such a transfer have already been discussed, and it meets with the unqualified approval of Professor Coulter. The total service budget, say $2860, would be for
590 majors of laboratory work, a ratio of $5.00, which would not be extravagant in view of the needs of the department; (in Physics the ratio is $6.60 for similar needs; in Chemistry, with less delicate material to handle, it is $3.70).

V. The Summer Quarter.

Botany had a special appropriation of $2415 for the summer quarter of 1912, and used, in addition, three regular staff members (Cowles, Crocker, Land), receiving $2167. The total cost for instruction was thus $4582. From this amount $194 for Professor Caldwell's work in the School of Education should be deducted, leaving $4388. A total of about 500 minors of work was taken in the department, equaling roughly about $5,000. The department earned therefore practically two-thirds of its summer quarter expenses, which is a good showing. The recommendation to reduce the special summer appropriation (see below in VI) is not intended to curtail the summer work at all, but it is intended to use the regular staff, especially the younger instructors, to a greater degree for the summer quarter, in order that in the fulfillment of the University statute of 2 majors of instruction per quarter for each instructor there be no disorganization of the staff. Simultaneous large special appropriations for the extra payment of more than one high-salaried professor in a given summer would thus be avoided.
THE HUMAN FACTOR

For many years a special emphasis on the human factor has been a major element of accident investigations. The human factor, whether it is the operator, the maintenance person, the supervisor, or the engineer, plays a critical role in determining the outcome of an accident. The human factor can influence decisions made during the operation of machines or processes, the way events are interpreted, and the overall safety culture of an organization. By understanding the role of the human factor, organizations can implement strategies to reduce accidents and improve safety.

A careful analysis of accident reports reveals that human errors are a significant contributor to accidents. This realization underscores the importance of human factors in accident investigations. The human factor should be considered in all phases of accident investigation, from preliminary data collection to final report preparation.

To effectively manage human factors, it is crucial to recognize the limits of human capabilities and the potential for error. This includes understanding how human performance can be affected by factors such as fatigue, stress, and workload. By implementing measures to mitigate these factors, organizations can enhance safety and reduce the likelihood of accidents.

In conclusion, the human factor is a critical aspect of accident investigation and must be given due consideration. By focusing on this factor, organizations can take proactive steps to improve safety and prevent accidents.
VI. Recommendations.

I have drawn up a tentative staff for Instruction and Service on the basis of the work offered by the department in the four quarters of 1912-13. Besides Professors Coulter, Chamberlain, Caldwell, Cowles and Crocker, there would be needed an instructor in Morphology (say at $1200, the present salary of Mr. Fuller); an instructor or associate in Physiology (say at $1,000, which is $100 more than Mr. Knight's salary); three assistants at $300 (Ph.D. candidates, with free tuition and fees, 9 hours' work a week); a curator-preparator at $1,000 and a preparator at $900; totaling $5,000. For summer quarter work there would be required an instructor at $400 or $500; and $250 for assistants: making a total of $5,750 for the four quarters. The present appropriation, outside of the professors enumerated above, is $7,400, with $2,415 additional for the summer quarter: a total of $9,815. The difference in cost would be $4,065. While the staff as outlined would be on a more liberal scale than we have in Chemistry, (averaging 1.8 majors per instructor per quarter against our 2.3 majors), the difference between my estimate and the present appropriations is sufficiently generous for some intermediate budget, which would make liberally possible the development of new lines of work in the department, which Professor Coulter is right in wishing to have a chance to develop.
My specific recommendations would be the following:

(1) That half of Professor Chamberlain's time be considered the equivalent of a research assistant to Professor Coulter, for joint direction of research in Morphology. Professor Chamberlain would then offer only one other course per quarter.

(2) That Professor Crocker be asked to give only four courses in 3 quarters, besides his research courses, or else, if full work is done, that he be provided with a research assistant at $1,000 out of the present appropriation. The former arrangement might be the preferable one.

(3) That a Curator-preparator be appointed out of present appropriations at a salary of $1,000.

(4) That a Collector be appointed out of present appropriations at a salary of $900.

(5) That gradually a readjustment of the department to some basis lying at least between the present one and that outlined above be made, the saving to be made primarily out of summer quarter special appropriations, and perhaps only to a minor extent, if at all, out of the regular budget.

I believe Professor Coulter will be glad to cooperate in some such readjustment.
The specific recommendation would be the following:

(1) That part of the Edward Company's line be connected to the department of a research arrangement to Professor

(2) The joint admission of research apparatus to the research department for common

Professor Edward's recommendation would then ensure only one expert source

But otherwise...

(3) That Professor Stoker be made to give only

your example in车厢，passing the research committee as

who, if full work is done, shall be to training with a

research consultant of $1,000 or as low beneath supplementation.

The lower arrangement with the supervision and as

(4) That a guaranteed consultant be accompanying and of

Professor supplementation at a salary of $1,000.

(5) That a consultant be accompanying and of

(6) That Edward is a research department of the report

work to some parts. Frye at least, personal for planning out one

that continuing grade to make the results to do what impossible

or to smooth further. After supplementation and besides can

I propose Professor Edward will also try to cooperate

In some such arrangement.
PHYSICS

I. Instruction.

The average number of courses per instructor per quarter is 1.8, exclusive of research courses.

II. Research Instruction.

The average number of research students per quarter was 4. This is probably below the usual average of the department.

III. Laboratory Assistants.

Allowed: $300; besides 4 Fellows and 4 Scholars.

Estimate of proper allowance: $200.

The department gives instruction to classes limited to 30 by staff members, and the fellows and scholars are almost sufficient for the minor assisting.

IV. Service.

The department uses $5360 for service. Of this amount at least $1200 is used chiefly for research work and $1300 for the making of apparatus which would otherwise have to be bought at much higher cost from the supplies and equipment fund. The balance, $2860, may fairly be considered to be used for "service": i.e., maintenance of apparatus, distribution of it, etc., etc. With 435 laboratory majors taken, the ratio is $6.60 per student major - a high ratio, but not an exorbitant one, in view of the delicacy and great expense of the apparatus used. At least 40% of this is paid back in the form of laboratory fees, reverting to supplies and equipment funds, and
In

The number of contacts and transactions is

decreased. The volume of transactions is

increased.

The number of contacts and transactions per

day is increased. Therefore, the number of

transactions per day is increased.
enabling the department to eke out its slim appropriation for equipment.

V. The Summer Quarter.

The department had a special appropriation of $1100, besides using $1667 worth of the time of its staff (Gale and Kinsley) in addition to Professor Michelson (not included in the estimate of cost). An attendance of 249 minors, roughly estimated at $6 per minor of work, meant a return to the University of roughly 54%. Other departments have done much better (Chemistry over 90%) for the summer, although 54% is acceptable. The recommendation is made, however, that when Professor Michelson is in residence in the summer a second "stellar attraction" be considered unnecessary (Dr. Born from outside gave a special course to 6 students).

VI. Recommendations.

The department seems to be run extremely efficiently, both from the point of view of instruction and output of important research and of highly trained men. The most pressing need of the department is for equipment. Its apparatus is inevitably costly, and it needs a correspondingly liberal amount for equipment. As soon as income for research becomes available, the Department of Physics, among the laboratory departments, should receive the first consideration, in my opinion.
The Secretary General, in his capacity as Chairman of the Inter-American Commission on Human Rights, has the honor to present the following statement:

The report of the Secretary General of the United Nations, dated 21st October 1970, was submitted for consideration by the Inter-American Commission on Human Rights at its thirty-second session, held from 15th to 26th March 1971.

The Commission, in its report, stresses the importance of the protection of human rights and fundamental freedoms in the context of the Inter-American system. It expresses its concern over the continuing violations of these rights and freedoms, particularly in the context of the ongoing conflict in the region.

The Commission recommends that the governments concerned take immediate steps to ensure the protection of human rights and fundamental freedoms, and to cooperate with the Inter-American Commission on Human Rights in this regard.

It is further recommended that the Inter-American Commission on Human Rights be given the necessary resources to carry out its mandate effectively.

At the same time, the Commission observes that the report of the Secretary General contains important information on the current situation and the measures taken by the governments concerned to respect and ensure the protection of human rights.

The Commission hopes that the governments concerned will continue to take the necessary steps to ensure the protection of human rights and fundamental freedoms, and to cooperate with the Inter-American Commission on Human Rights to achieve this goal.

In conclusion, the Commission reiterates its determination to continue to monitor the situation in the region and to provide assistance to the governments concerned in the protection of human rights and fundamental freedoms.
SUMMARIES

I. INSTRUCTION.

Department.    Ratio of Courses Per Quarter Per Instructor
(exclusive of research courses).

Physics          1.8
Chemistry         2.3
Zoology          1.8 (exclusive of Professors
                 Williston and Tower.)
Anatomy          1.6
Physiology       1.3
Physiological Chemistry 1.3
Botany           1.3
Pathology        1.7
Bacteriology     1.25

II. RESEARCH INSTRUCTION.

Department.    Average Number of Students per Quarter.    Provision.

Physics         4                                     $ (1200)
Chemistry       16                                    2500
Zoology          8                                    1000
Anatomy          1                                    
Physiology       3                                    
Physiological Chemistry 7                     1222
Botany           14                                   
Pathology        5                                    300
Bacteriology     5                                    750

Tables I and II taken together indicate the need for some readjustment for research instruction.
I. INTRODUCTION

Department of Physics of the Graduate School of Technology (a)

1. Introduction

2. Background

3. Aims

4. Methodology

5. Results

6. Discussion

II. RESEARCH INQUIRY

1. Aims

2. Methodology

3. Results

4. Discussion

5. Implications

6. Conclusion

Table I and II carry together for your interest.

Note: These statements for better understanding.
III. LABORATORY ASSISTANCE.

The amount tabulated under "Allowed" will not tally with the amount called "Laboratory Assistance" on the University books, because in many departments instructors are used as assistants or in lieu of them, and in others (in Chemistry Miss Terry is giving independent courses as an instructor) instructors' salaries and research funds are included in the University's record. Under "Allowed" below is stated the cost of laboratory assistance calculated as described on pp. 7-8; that is, an excess in staff appointments, not needed for instruction, is classified as "Allowed Laboratory Assistance".

Under "Estimate of Proper Allowance" is given the estimate made according to pp. 7-8, deducting Fellows and, in most departments, Scholars, from the estimate.

<table>
<thead>
<tr>
<th>Department</th>
<th>Allowed.</th>
<th>Estimate of Proper Allowance.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>$300</td>
<td>$200</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2700</td>
<td>3050</td>
</tr>
<tr>
<td>Zoology</td>
<td>1000</td>
<td>620</td>
</tr>
<tr>
<td>Anatomy</td>
<td>2767</td>
<td>2100 (Difference returned to U)</td>
</tr>
<tr>
<td>Physiology</td>
<td>3250</td>
<td>850</td>
</tr>
<tr>
<td>Physiological Chemistry</td>
<td>2200</td>
<td>450</td>
</tr>
<tr>
<td>Botany</td>
<td>4766</td>
<td>820</td>
</tr>
<tr>
<td>Pathology</td>
<td>300</td>
<td>350</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>1300</td>
<td>350</td>
</tr>
</tbody>
</table>
The normal procedure under "Allowance and Relief" with the "Application of Land and Services for "Relief," the University Board, proceeds to make recommendations to the Home of the North, and to approve the necessary (rather than the national) recommendations. The only question is how the recommendations and recommendations can be made to the Home of the North, rather than in the national opinion. The former is not necessary for the recommendations to be made in "Allowance and Relief."
The wide variations result primarily from an over-development of instructional forces, and inadequate organization of service and provision for research. In some cases, even with such a provision there would remain a considerable excess over actual requirements.

### IV. SERVICE.

<table>
<thead>
<tr>
<th>Department</th>
<th>Service. Recommended</th>
<th>No. of Laboratory Present</th>
<th>Cost Per Major Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>$2850</td>
<td>$2850</td>
<td>435</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4880</td>
<td>4880</td>
<td>1326</td>
</tr>
<tr>
<td>Zoology</td>
<td>1900</td>
<td>1900</td>
<td>427</td>
</tr>
<tr>
<td>Anatomy</td>
<td>2400</td>
<td>2400</td>
<td>873</td>
</tr>
<tr>
<td>Physiology</td>
<td>2520</td>
<td>3480</td>
<td>572</td>
</tr>
<tr>
<td>Physiological Chemistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botany</td>
<td>960</td>
<td>2800</td>
<td>590</td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacteriology</td>
<td>360</td>
<td>900</td>
<td>230</td>
</tr>
</tbody>
</table>

All increases recommended are to be made by a transfer from instruction.
The aim of this paper is to present practical approaches for the development of efficient and sustainable energy systems. In some cases, new ideas such as photovoltaic panels may remain a concept, while in others, their potential may be realized in the near future. The table below summarizes some key points of interest:

<table>
<thead>
<tr>
<th>Project</th>
<th>Department</th>
<th>Scale</th>
<th>Impact</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Plant</td>
<td>Electrical Engineering</td>
<td>20 MW</td>
<td>120 million kWh</td>
<td>Under construction</td>
</tr>
<tr>
<td>Solar Farm</td>
<td>Civil Engineering</td>
<td>50 MW</td>
<td>85 million kWh</td>
<td>Commercial operation</td>
</tr>
<tr>
<td>Wind Farm</td>
<td>Mechanical Engineering</td>
<td>100 MW</td>
<td>250 million kWh</td>
<td>Expansion planned</td>
</tr>
<tr>
<td>Hydro Project</td>
<td>Environmental Science</td>
<td>50 MW</td>
<td>150 million kWh</td>
<td>Water conservation</td>
</tr>
</tbody>
</table>

All information is preliminary and under review by the respective departments.
### V. SUMMER QUARTER.

<table>
<thead>
<tr>
<th>Department</th>
<th>Special Appropriation</th>
<th>Staff (excluding Michelson)</th>
<th>Attendance (in minors)</th>
<th>Ratio of Cost &quot;Earned&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics</td>
<td>$1100</td>
<td>$1667</td>
<td>249</td>
<td>54%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2500</td>
<td>3032</td>
<td>892</td>
<td>97%</td>
</tr>
<tr>
<td>Zoology</td>
<td>2046</td>
<td>1367</td>
<td>204</td>
<td>35%</td>
</tr>
<tr>
<td>Anatomy</td>
<td>850</td>
<td>667</td>
<td>64</td>
<td>25%</td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiological Chemistry</td>
<td>1100</td>
<td>894</td>
<td>266</td>
<td>80%</td>
</tr>
<tr>
<td>Botany</td>
<td>2221</td>
<td>2167</td>
<td>500</td>
<td>60%</td>
</tr>
<tr>
<td>Pathology</td>
<td>400</td>
<td></td>
<td>110</td>
<td>165%</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>300</td>
<td>2167</td>
<td>113</td>
<td>28%</td>
</tr>
</tbody>
</table>