evaluation from the standpoint of the topic considered.

CONFERENCE OF MIDWEST BIOLOGY TEACHERS
October 25-26, 1957
Drake University, Des Moines, Iowa

Discussion Group #8.
Research and Teaching. What is the role of research in teacher stimulation, the use of undergraduate students in research programs? How does research influence faculty loads? Summer programs? What are sources of financial support?

Chairman: John Ketterer, Monmouth College, Monmouth Ill.

Recorder: Jerry J. Kollros, State U. of Iowa, Iowa City, Iowa

Participants: (18)
Arthur E. Duwe
P. B. Hofslund
Howard Young
Charles M. Vaughn
John Ketterer
M. D. Huffman
Frederic A. Giere
Sister M. Vincent, A. S. F.
Jerry J. Kollros
Theodore J. Urban
William K. Stephenson
Byrl E. Benton
Ted F. Andrews
Hugh Barker
Robert Buchholz
Allen B. Schlesinger
L. P. Coonen
Arlan L. Edgar
Wisc. State College
Univ of Minn. (Duluth)
Wisc. State College
Univ. of South Dakota
Monmouth College
Central College
Luther Collere
Coll. of St. Francis
State U. of Iowa
The Creighton Univ.
Zarlham College
Drake University
Kansas St. Teach. Coll.
St. Cloud St. College
Monmouth College
The Creighton University
Univ. of Detroit
Alma College.
Superior, Wisconsin
Duluth, Minn.
LaCrosse, Wisc.
Vermillion, South Dakota
Monmouth, Ill.
Pella, Iowa
Decorah, Iowa
Joliet, Ill.
Iowa City, Iowa
Omaha, Nebr.
Richmond, Indiana
Des Moines, Iowa
Emporia, Kansas
St. Cloud, Minn.
Mormouth, Ill.
Omaha, Nebr.
Detroit, Michigan
Alma, Michigan

A. "Problem Research" for the undergraduate students. The discussion was concerned almost wholly with the problems faced by the "small" college.

I. Space is usually lacking, but commonly a desk, or a corner or section of a general laboratory, is assigned. Rarely are separate rooms available. Frequently faculty offices are shared with the junior-senior students who are carrying out the research.

II. Lack of separate or substantial budget for these problems requires ingenuity in acquiring equipment and materials to pursue them. It also serves to limit the kind of research which can be done.

III. Tight budgets also restrict the availability of literature for reference work. The college library must frequently be supplemented by the personal library of the biology instructor, including his collection of reprints.

The desirability of a research "problem" was not discussed, but appeared to be generally accepted. It was reported that at Monmouth, following the introduction of a "problem", the dropout rate of junior and senior biology students was substantially reduced; i.e., the problem was an interest-sustaining part of the program. It was also suggested that undergraduate research problems must be realistically considered, to be of smaller dimensions or of more limited scope than those entertained in
graduate school.

B. Research by faculty.

The same problems faced above in (A) are faced in considering faculty research; i.e., limitations of space, library, equipment and materials. The further problem of faculty time must also be considered, since the usual teaching loads involved 16-22 contact hours each week. Ultimately the problem of publication and reprint costs must also be faced. In some institutions these costs are met personally, while in some there is a subsidy.

It was pointed out that some faculty research could be conducted in the summer, frequently under subsidies of governmental agencies or industrial concerns, and that in such instances publication costs could be borne by the agency or concern.

This discussion led to the request that a list of agencies supporting research by faculty members be supplied. Such a list is included as Appendix A.

The discussion also indicated that in certain schools a positive antagonism of higher administrative officers to faculty research is tolerated but not encouraged. Such situations require "corrective action". The resolution of the group, adopted at the Saturday luncheon session (see appendix B), could be used as a lever to move reluctant administrators somewhat toward more favorable points of view regarding faculty research. It was further urged that a larger fraction of the college teachers become acquainted with research grant opportunities, particularly those of the National Science Foundation and the National Institutes of Health. The overhead charge of 15% which these grants can bear, it was suggested, might make some administrators look upon sponsored faculty research with greater favor. One school had appointed a research grant coordinator, for "contact" work.

C. Teaching and Research.

Several schools have a policy of conducting departmental or group seminars for senior majors of the department. In a few the juniors are included. Many of these seminars are integrative. Some, or parts of some, are oriented toward current research work, and may serve as the stimulus to students in originating their senior problems. These senior seminars, frequently involving the time of more than one of the departmental faculty members, tend to be more expensive to conduct than standard courses, and they may cost a faculty member a large fraction of teaching and preparation time without constituting a very big fraction of his contact hour load.

In a brief survey of teaching times, the small "teachers" colleges seemed to have the largest number of required hours of teaching. In the other colleges, 16-18 contact hours seemed to be most common. The load in the small universities was about 12 hours, and in the larger ones even less. These reduced loads in the larger schools are somewhat deceptive, because they may be in larger classes, requiring more grading and record time, and in no case do they include the unassigned hours spent individually in directing graduate student work, reading theses, and sitting on committees examining for advanced degrees.

The special teaching programs and the related problem of teaching loads all impinge upon research time. A committee to inquire into the time and interest in research activities in the various institutions represented at this conference was appointed, to report at the 1958 meeting (committee of Stephenson, Vaughn, and Barker.