Minutes of the Second Meeting of the National Association for Research in Science Teaching

The first programmed meeting of the Association was called to order by President W. L. Eikenberry on February 25th, 1929, at 2:00 P. M., at the Cleveland Hotel. The program was presented as printed and in addition, Mr. Jesse Whitsit reported briefly on the report of Dr. John Tildsley, Assistant Superintendent of Public Schools, New York City. Dr. Tildsley's report is entitled, "Teaching Science as a Way of Life." The reports reflected the spirit of the Organization in that each of them was a report of significant research relating to problems of science teaching.

There were sixty in attendance, representing a wide geographical area.

The meeting closed about 5:00 P. M.

The program follows:

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING
PROGRAM

Cleveland Meeting, February 25th, 1929
Cleveland, Ohio

Open Meeting, 2:00 P. M.
Hotel Cleveland, Room T

Presiding: W. L. Eikenberry, State Teachers College, East Stroudsburg, Pennsylvania

1. The Determination of Important Principles of Science to be Included in the Curriculum
   Elliot R. Downing, University of Chicago, Chicago
2. Inventory of Certain Aspects of Learning in Physics
   Earl R. Glenn, New Jersey State Teachers College, Montclair, New Jersey
3. Science Equipment in Missouri High Schools
   Ralph K. Watkins, University of Missouri, Columbia
4. The Achievement of Students in High School and University Physics
   A. W. Hurd, University of Minnesota
5. A Synthesis and Evaluation of Subject Matter Material in General Science
   Francis D. Curtis, University of Michigan, Ann Arbor
6. A Study of the Activities of Science Teachers
   Harry A. Cunningham, Kent State Normal College, Kent, Ohio
7. Present Specific Objectives in Junior High School Science as Revealed by Selected Investigations, Courses of Study and Textbooks
   Ellis C. Persing, Cleveland School of Education, Cleveland

Mimeograph sheets reporting research in progress by members of the Association or under their direction were distributed at the meeting. The names of those reporting together with titles is as follows:

H. A. Carpenter, Rochester, N. Y.

I. Determination and organization of a twelve-year course in science having dependent continuity. It involves:
   1. Science for Kindergarten and grades 1 to 3
   2. Science for grades 4 to 6
   3. Articulation of the elementary grades science with that of the junior high school
   4. Determination of organization and content for 10th year science, articulate with the junior high school science and introductory to the 11th and 12th year physics and chemistry
   5. Reorganization of physics on a basis of principles and integrated with 10th year science.
   6. Reorganization of chemistry on a basis of principles and integrated with physics.

II. Determination of the relation of final grades in physics and chemistry for pupils having had general science or biology preparation.

J. O. Frank, Oshkosh, Wisconsin

Superstitions of the Fox River Valley of Wisconsin, The Part They Play in Everyday Life, and What Science Education Should Do About It.

Morris Meister, New York Training School for Teachers, New York City, reporting for the Committee on Science of New York City of which he is chairman.

1. Aims in Science Teaching
2. Science Sequences in New York City
3. What Constitutes a Good Science Teacher

A Joint Committee on Research has just been organized, consisting of six members:

1. The President of the Physics Club
2. The President of the Chemistry Teachers' Club
3. The President of the Biology Teachers' Association.
4. The Chairman of the Committee on Science in New York City
5. The Chairman of the Secondary Science Section of the Experimental Society
6. The Chairman of the Elementary Science Section of the Experimental Society.

E. L. Palmer, Cornell University, Ithaca, New York.

1. An analysis of the problems and methods of value in the teaching of science to students in normal schools and teachers colleges.—E. L. Palmer and Karl Hazeltine.
2. An investigation into the factors influencing the response of a community in regard to the use of the recreational opportunities of its environment.—E. L. Palmer and Robert Johnson.

F. A. Riedel, Kansas State Teachers College, Pittsburg, Kansas

A Comparison of Several Factors in the Demonstration and Laboratory Methods.

Ralph K. Watkins, University of Missouri, Columbia, Missouri

1. Revision of Peters-Watkins unit tests in high school physics.
2. Actual practice in Missouri high schools in separation of illustrative demonstrations done by the teacher and those done by pupils in the laboratory for high school physics (with C. O. Williams).

3. A listing of experiments and exercises suggested in general science text-books.
4. Construction of unit tests for first year College Chemistry (with E. C. Buckner).

H. A. Webb, George Peabody College for Teachers, Nashville, Tenn.

1. Are High School Chemistry Texts Adequate in the Field of Organic Chemistry (Completed).
2. Are High School Chemistry Texts Adequate in the Field of Industrial Chemistry (Practically completed).
3. The Mathematics of College Chemistry (In progress).

S. R. Powers, Teachers College, Columbia University.

1. Professional content for teachers of Elementary Science.
2. Subject matter of Elementary Biological Courses in College.
3. Learning outcomes from laboratory notebook work.
4. Instruction in Chemistry in Agricultural Colleges.
5. Learning Elements essential to the development of ability of writing chemical equations.
6. Subject matter Objectives of High School Chemistry.
7. Building Health Concepts through the teaching of High School Biology.

E. R. Glenn, State Teachers College, Montclair, New Jersey

1. An Investigation of the needs of science teachers in small high schools.

J. A. Hollinger, Pittsburgh, Pa.

1. Tests for Natural Science in Junior High School—Grades 7, 8, and 9.

The business meeting was held at the dinner hour on February 25th, at the Cleveland Museum of Art. The members of the Association were the guests of the Cleveland School of Education. President W. L. Eikenberry presided. The items of business were as follows:

1. Qualifications for membership:
   It was voted that the Executive Committee formulate qualifications for membership. An essential qualification for membership is that the proposed member has published acceptable research.
2. Report of the Committee on Publications:
   The report of the Committee consisting of Messrs. C. J. Pieper, E. R. Glenn, and W. G. Whitman was as follows:

TENTATIVE REPORT OF COMMITTEE ON PUBLICATIONS OF NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING

(Cleveland meeting—Feb. 25, 1929)

Your Committee presents the following report for your considerations and approval:

The Committee has canvassed various possibilities relating to publications of the Association. The major considerations which came before our committee are as follows:

1. Our Association has expressed an interest in publishing a Yearbook and members of the Association have suggested the publication of materials in a journal.

2. There is, at the present time, an urgent need for the publication of articles and studies, especially those of a research character, which will assist in integrating the science curriculum from the kindergarten to the junior college and thus place the teaching of science in a more favorable light. This need arises from or is shown by:
   (a) The wide chasm between practice and the present knowledge of educational and natural sciences.
   (b) The availability of a large amount of unpublished and valuable material of a research character.
   (c) The growing quantity of results of productive research.
   (d) The inadequacy and ineffectiveness of present journals in the field of Science Education.
   (e) The activities of those interested in other subjects.
3. Whatever decision our Association reaches regarding its plan of publication it should
   (a) attempt to publish materials of such nature as will cover the entire field of science teaching from the kindergarten to the junior college, including the normal schools and other teacher training institutions

   or

   (b) coordinate its efforts in publication with one or more of the existing journals to the end that the product of such coordination will cover the entire field and present a unified program of science teaching.
4. Whether the Association publish separately or in coordination with existing journals, the scope of the publications shall be such that it will:
   (a) present current investigations in science teaching.
   (b) present abstracts or resumes of investigations completed in the past but not yet published.
   (c) suggest problems for investigation.
   (d) present excellent articles in science content, such as modern research in this or that science field or modern applications of science.
   (e) furnish notices and reviews of books, courses of study, special pamphlets and bulletins on science teaching, and other publications of value to the science teacher.
   (f) present personal notes and significant movements in our field.
   (g) provide abstracts of articles in other journals, both educational and scientific.
5. Our Association may publish a Yearbook or monograph annually or at such intervals as the Association deems advisable, such Yearbooks or monographs to present comprehensive studies and to serve as a guide of the current trends in Science Education coordination with an existing journal, or it may arrange to publish its materials in one of the existing journals.
   (a) Several specific possibilities are:
      (1) Publishing articles in The General Science Quarterly.
      (2) Publishing articles in School Science and Mathematics.
      (3) Publishing articles in The Nature and Science Education Review.
      (4) Taking over General Science Quarterly and effecting a new Journal of Science Education.
      (5) Launching a new journal.
   (b) Whatever plan is adopted the Association should have some plan of editorship and management.

7. The Association must consider plans of financing and promoting any plan of publication. The estimated costs of publications considered are here given:

(a) A Yearbook or monograph of 160 pages, 6 by 9, bound in paper cover will cost approximately
for 500 copies—$600.00 plus office expenses $200 equals $800
for 1000 copies—$700.00 plus office expenses $200 equals $900
If sold for $1.50 each, such yearbook or monograph will pay for itself, provided about 1000 conies are printed and sold. Any number above 1000 will yield a profit. School Science and Mathematics offers to publish 1000 copies of the Yearbook at approximately $1500.00.

(b) Articles or studies, approximating a total of 30 pages per issue, will be published by General Science Quarterly at no expense to the Association.

(c) Articles or studies, 30 pages or more per issue, will be published by School Science and Mathematics at the rate of $8.00 per page. The materials may be run in a separate section of consecutive pages under a department entitled Research in Science Education. The editor of School Science and Mathematics reserves the power to make final decisions on the inclusion of any materials. At the rate of 30 pages per issue for eight issues, this plan would cost the Association approximately $2000.00 annually. Four issues of 68 pages would cost $2096.00.

(d) Figures for Nature and Science Education are not available. All that may be said now is that this journal will publish articles and studies at a minimum printing cost, all overhead expenses to be borne by the Nature Association.

(e) 1. If the Association takes over General Science Quarterly and expands it to four issues of 68 pages each, the total expense will be approximately $1600.00 for the first year. Basic figures for this estimate are here given:

Expense		
Cost of 4 issues of 1500 copies		$1600.00
Business and mailing		300.00
Promotion work		300.00
		$2200.00
Price of General Science Quarterly		2000.00
	Total	$4200.00
Income		
12 pages advertisement	$1200.00	
Subscriptions (1000)	1400.00	
Total		$2600.00
Net Expenses		$1600.00

The cost of the purchase of General Science Quarterly may be met by deferred payments over a period of 4 or 5 years.

(e) 2. If the Association takes over General Science Quarterly and publishes 2000 copies, the expenses will be about $4600.00 and the income about $4000.00.

(f) If the Association launches a new journal the total expense of 1000 copies of four issues of 68 pages each will be about $2200.00. The income will depend upon the number of subscribers and the advertising receipts. This income cannot be estimated since the subscription list would have first to be developed.

RECOMMENDATIONS

In the light of the considerations presented, your committee offers the following recommendations for your approval:

1. That the National Association for Research in Science Teaching launch upon a program of publishing materials of value to Science Education.
2. That the Association publish a Yearbook, annually or at such intervals as appropriate materials are available. Each issue of the yearbook shall be devoted to significant developments or current trends in Science Education or to a major aspect of this field.
3. That the Association publish at intervals throughout each year such professional materials as do not lend themselves to the purposes of the Yearbook.
   (a) The purpose of these materials shall be to promote an integrated program of Science Education.
   (b) The scope of these materials shall be the content and method of the teaching of science from the kindergarten to the junior college as well as the problems of training science teachers and supervisors.
   (c) The content of these materials shall include:
      (1) current investigations in science teaching.
      (2) abstracts and resumes of unpublished investigations completed in the past.
      (3) suggested problems for investigation.
      (4) modern research in pure and applied science.
      (5) reviews of current publications in the field of science and science teaching.
      (6) personal notes.
      (7) articles of a general nature significant to science teaching.
      (8) abstracts of articles in other journals, both educational and scientific.
4. That the Association take over the property interests and good will of the General Science Quarterly as a first step in the development of a new journal under an appropriate title such as The Journal of Science Education.
5. That the Association shall effect a corporation or organization for the purpose of financing and directing the development of the new journal.
6. That the Association shall select an editorial board to act in an advisory capacity on all matters pertaining to the editorial policies of publicaions, this board to be composed of members who represent the various interests which will contribute to an integrated program of Science Education.
7. That the Association shall create an executive board and authorize it to proceed, under the sponsorship of the Association and the advice of the editorial board with the following program:
   (a) A yearbook such as mentioned in Recommendation No. 2.
   (b) A journal such as mentioned in Recommendation Nos. 3 and 4.
8. That the Association determine on a subscription price of its journal and on a fair proportion of each subscription to be turned into the treasury of the Association beginning at such time as shall be most beneficial to all concerned in this program of publication.
9. That members of the Association take an active interest in the journal, secure subscriptions as rapidly as possible, and suggest or send to the editorial board available articles for publications as well as the names of possible advertisers.

Following the report it was moved to accept the offer of Mr. W. G. Whitman, Editor of "General Science Quarterly" to allow the use of his journal for one year as the official publication of the Association and that an option be taken for the purchase of the journal at the end of the year. After considerable discussion this motion was carried by a vote of 15 to 6. It was then moved to recommend to Mr. Whitman that the name of the Journal be "Journal of Science Education." It was moved that the Committee on Publications be continued and that it act as a representative of the Association on the Editorial Board of the journal during the year. A letter to the Secretary from Mr. Pieper under date of March 21, 1929 quotes from Mr. Whitman as follows:

> "I shall be very glad to have the Research Science Association use about thirty pages in each issue of the Quarterly for next year. I cannot promise that it will always be just thirty pages, and I shall wish the opportunity of making it less or more as circumstances determine. I am also willing to give the Association an option of purchasing the Quarterly a year hence on approximately the same terms as offered this year. I wish to be allowed the privilege of making some change should I so desire when the time comes. Also will change the name to Journal of Science Education."

A vote of thanks was extended to the School of Education for the use of their rooms and for the dinner which they served to the Association.

The Treasurer reported that thirty-one members had paid dues during the first year and that there was $62.00 in the treasury.

It was voted that the Executive Committee be continued another year.

Following the business meeting there was a discussion of the topic, Problems of Supervision in Science in City and State Systems. Leaders in the discussion were:

Harry A. Carpenter, City Schools, Rochester, New York
Edward E. Wildman, City Schools, Philadelphia, Pa.
Gerald S. Craig, Horace Mann School, Teachers College, New York City

S. R. POWERS,
Secretary and Treasurer.