

# Newsletter

Vol. 20 No. 4 NEWSLETTER OF THE NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING Oct. 1978

## President's Page

We are well into our 52nd year as a research organization--and we're not in debt. Over 700 science educators belong to NARST. We publish a widely respected journal and we hold a well attended and stimulating annual meeting. For all of those things we can be thankful. Two persons especially important in maintaining NARST are Paul Joslin, the Executive Secretary, and David Butts, the Journal Editor. Their services to all of us deserve our gratitude.

There are several things that all NARST members should consider doing in the next few months to aid themselves and the organization.

1. Submit papers for the 1980 Annual Meeting to be held in Atlanta to Jack Renner. (Submission forms are included in this Newsletter.)
2. Let Jack Renner and his Program Committee know of any sessions on Techniques and Procedures of Research you would like scheduled for Atlanta (a form was in the June Newsletter).
3. Check your library to see that the Journal of Research in Science Teaching is there. If it isn't, suggest that it be ordered.
4. Encourage colleagues who are science educators to join the organization.
5. Contact President-elect, Jack Renner (Physical Sciences Center, Room 323, University of Oklahoma, Norman, OK, 73019) if you would like to serve on some committee in the organization. He won't know if you are interested and available unless you tell him.
6. Send me (Department of Science Education, University of Georgia, Athens, GA, 30602) your concerns and suggestions about the organization. The Board will meet this year in late November and we will try to deal with them.

James R. Okey  
1978-79 President

### NOMINATIONS FOR OFFICERS 1979-80

The Bylaws require two nominations for each office. The slate of the Nominating Committee is published in the Newsletter and nominations are solicited from the membership.

The following have been nominated for President-Elect to replace John W. Renner who replaces Jim Okey as President:

Stanley L. Helgenson

Professor of Science Education and Associate Director for Science Education, ERIC Center for Science, Mathematics, and Environmental Education. The Ohio State University, Columbus, OH

Richard L. (Dick) Sagness

Professor of Education and Associate Dean of Research, Service, and Development. University of South Dakota, Vermillion, SD

For member of the Board to replace George Ivany and Ron Raven whose three-year terms expire:

Fred N. Finley

Assistant Professor Science Education, University of Wisconsin-Madison, WI

Paul C. Beisenherz

Associate Professor Science Education, University of New Orleans, LA

John T. Wilson

Associate Professor Science Education, Director of Research and Evaluation for Iowa ASSIST, University of Iowa, Iowa City, IA

Jack A. Easley, Jr.

Professor of Teacher Education Director: Sciences Tutoring Laboratory, University of Illinois, Champaign, IL

Additional nominations may be made by petition of ten (10) members. Said petitions should be in the hands of the Executive Secretary one month from the post date of this Newsletter.

Complete vita on all candidates will be sent with ballots.

### NARST DUES AND FINANCES

NARST financial records are kept on a calendar year basis. This makes it easier to handle bank records, comply with laws regulating non-profit organizations and to make financial reports to the Board and members.

NARST dues are, therefore, for the calendar year. 1979 dues will be \$24.00. Of this \$15.00 is for the journal subscription (which costs non-members \$30.00) and \$9.00 is for NARST operations. Dues notices for 1979 will be mailed December 1st. Prompt payment will make record keeping much simpler and insure uninterrupted mailings of notices, newsletters and journals.

TO: NARST AND AETS MEMBERS  
 FROM: Committee on Research in Science Teaching of the National Science Teachers Association  
 RE: Locating Researchers Interested in Writing Articles for the Research Column in the NSTA Journals

Within the past few years National Science Teachers Association has instituted a department on "What Research Has to Say to the Science Teacher" in its three journals, Science and Children, The Science Teacher, and the Journal of College Science Teaching (where it is called Research on College Science Teaching Department). The NSTA Committee on Research in Science Teaching encourages educational researchers to seriously consider writing for this department. Articles should be written specifically for the journal's audience (i.e., elementary, secondary, or college science teachers) and should be directed at classroom applications of research, rather than a reporting of research results per se. References should be research based. Manuscript preparation guides for each journal can be acquired from its editor by writing NSTA at 1972 Connecticut Avenue, N.W., Washington, D.C., 20009. Recent issues of the three journals can be consulted for examples of articles in this department.

Manuscripts for consideration in the "What Research Has To Say To Science Teachers" department should be sent to the department's editor, Dr. Mary Budd Rowe, Director, Division of Research, National Science Teachers Association, c/o Institute for Development of Human Resources, 513 Weil Hall, University of Florida, Gainesville, FL, 32611. Manuscripts will be considered for publication following the usual procedures of each journal.

We of NSTA's research committee hope that members of NARST will provide this important service, and we look forward to receipt of manuscripts.

#### NEW IN 1979: EUROPEAN JOURNAL OF SCIENCE EDUCATION

This journal will be published in collaboration with the Institute for Science Education (IPN), Kiel, FR Germany and will appear quarterly in January, April, July, and October.

It will bridge the gap between researchers, administrators and teachers, and between countries, dealing with all levels of science teaching: educational issues in the general science, integrated science, biology, chemistry, physics, earth sciences, geology, and technology; to teachers at primary, secondary, and tertiary levels and including science education in industry and commerce.

To order: Subscription Dept., Taylor & Francis LTD, 10-14 Macklin Street, London WC2B 5NF (subscription rates for 1979: USA (air-freight) - \$50.00, cheque/money order payable to T & F LTD.

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*Historical Researchers*—carrying out studies of science teaching and science education in the 20th century

### TABLE OF CONTENTS:

**SCIENCE TEACHING.** Aims and Objectives of Science Teaching. Science Curriculum. Instructional Procedures. Instructional Media. Science Equipment, and Facilities. Science Tests and Assessment Instruments.

**RESEARCH AND SPECIAL INTEREST AREAS.** Science Education Research. Applications of Psychological Theories in Science Education. Evaluation of Science Programs. Science Education History. Science Teachers and Teacher Education. Science and Society. Scientific Information. History of Science. Education in General.

**JOURNAL FEATURES.** Abstracts. Book Reviews. Editorials and Editorial Comments. Science Education Associations' Affairs. Miscellaneous Information.

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NARST ANNUAL MEETING  
CALL FOR PROPOSALS  
Atlanta, Georgia March 21-23, 1979

The 1979 annual meeting of the NARST will be held in The Atlanta Hilton Hotel on March 21-23, 1979. It will precede the NSTA meeting. Members of the association and other interested persons are invited to submit program proposals. A description of each type of activity which will be included in the program follows. General sessions with invited speakers will also be scheduled. Each proposal should be accompanied by an appropriate cover page similar to the one which follows.

Mail all program proposals with two stamped, self-addressed envelopes to:

John W. Renner  
President-Elect, NARST  
Room 323, Physical Sciences Center  
University of Oklahoma  
Norman, OK 73019

ALL PROGRAM PROPOSALS MUST

BE RECEIVED BY

November 15, 1978

TYPES OF PROGRAM ACTIVITIES

The following types of activities are planned and proposals are solicited in each category:

1. Contributed Papers--reports of research that specify:
  - a. objectives and rationale for the study
  - b. methodology and design
  - c. instruments and data
  - d. results and conclusions

Contributed papers are typically grouped by topic and three or four related papers are presented at a concurrent session. A discussant will be assigned to each set of contributed papers.

2. Paper Sets--Several related studies originating from a common research center or line of research can be structured as a set of from three to five separate-but-related reports. This grouping allows for common elements of design or approach to be presented once instead of several times. A paper set can also allow for the division of a single report which represents a major research effort in terms of time, number of workers, and/or geography. An outside discussant may be assigned to paper sets.

CALL FOR APPLICANTS FOR THE  
POSITION OF EDITOR OF  
THE JOURNAL OF RESEARCH IN SCIENCE TEACHING

The editor of the Journal of Research in Science Teaching is appointed by the NARST Board and serves for 5 years. David Butts will finish his term as editor on December 31, 1979. A new editor will be announced at the 1979 Annual Meeting in Atlanta. The person selected will then have several months to become familiar with the operation of the journal and become the new editor on January 1, 1980.

Duties: The JRST editor is responsible for coordinating the review of all manuscripts submitted for publication. This involves correspondence with authors, with the editorial review board of the journal, and the publisher. The JRST editor is an ex-officio member of the NARST Board and attends all board meetings to report on the operation of the journal.

Term: Five year term beginning January 1, 1980. The editor will be selected by May 1979 to allow a smooth transition from the present operation.

Nature of

Applications: The person selected as editor must negotiate 1/3 released time from his or her institution for the period January 1, 1980--December 31, 1984. A 1/2 time secretary for this period is also needed. Costs of duplicating manuscripts are provided by the institution (approximately \$1000/year). NARST provides the editor with travel expenses for attending the 2 board meetings each year and \$600/year for postage. The publisher of the journal provides the editor with review forms, mailing labels, and stationary. A letter of support from a dean and/or vice-president must accompany the application and state the willingness of the institution to provide a 1/2 time secretary, \$1000 per year for duplicating, and 1/3 released time for the editor.

Procedure: Applicants will be screened by the committee named below and forwarded to the NARST Executive Board.

Committee: Ronald J. Raven, SUNY at Buffalo  
Carl F. Berger, University of Michigan  
Stanley L. Helgeson, Ohio State University  
Wayne W. Welch, University of Minnesota

Deadline: Send applications to Ron Raven (who is chairing the search committee) at this address by *November 20, 1978*.

Ronald J. Raven  
Faculty of Educational Studies  
State University of New York at Buffalo  
Amherst, New York 14260

3. Panels--There are many debatable issues in science education and panels can be constituted based on the positions taken by members. Such panels provide a mechanism for debating issues and involving interested members in such discussions of views.
4. Round Table Discussions--Round table discussions are used to provide a thorough analysis of a paper by a group. Presenters will have an hour in which the rationale, design, procedures, instruments, and results from a study are examined with others in a discussion format. One or more papers may be discussed simultaneously in a round table format. If members agree to present their research in this format they should bring materials such as protocols, instruments, computer printouts, experimental curriculum materials, and logs to the session to aid discussion. The round tables will be held in a large room with one or more papers being discussed, each at a separate table. The format will not be conducive to presentations which involve the use of audio-visual equipment.
5. Symposia--Areas of current research or research needs should be identified. Members of the symposium will prepare papers addressing themselves to the identified issues. Symposia should include persons with varying backgrounds, positions, and research interests. In addition to presentations concerning research in a given area, interaction among the symposium presenters, other discussants, and the audience is anticipated. Varying views, approaches, data reports, and data interpretation are desirable features.
6. Techniques and Procedures of Research--These sessions of two to three hours are provided to help the members of the NARST acquire new research understandings and/or skills or update old ones. The sessions are planned for intensive involvement with some aspect of problem identification, research methodology, data analysis, data interpretation, or some other aspect of research in science teaching. Proposals should include a statement of objectives for the session, a description of the activities to be followed, plans for evaluation, and a listing of annotated references pertinent to the topic. A 100-word description of the session that could be printed in the program should be included in the proposal. The credentials and teaching experiences related to the proposed work session should be included. If there are specific types of "Techniques and Procedures of Research" sessions you would like to enroll in as a participant, complete and return the special form provided in this NEWSLETTER. The Program Committee reserves the right to ask particular individuals to present these sessions if the need arises.

In order to provide guidance to the program participants for future presentations, a person--a debriefer--may be assigned to each program activity. The debriefer will hold private conferences with the presenters immediately following the session.

## PROPOSAL GUIDELINES

An individual is limited to the presentation of one paper, although this individual may be permitted to appear on the program at additional times as either the second author of a paper, as a member of a symposium panel, or as a presider or critic.

Proposals must be accompanied by a completed cover page similar to the one which is included in this NEWSLETTER. The proposals submitted in categories one through five will be rated anonymously by members of the Program Committee. The criteria employed will be: (1) relevance to the objectives of NARST, (2) general quality, and (3) clarity of expression. Proposals must consist of a cover page and four copies of a summary of the research being reported. The summary must not contain more than 500 words and must not include the name of the contributor. All cited references must be accompanied by a complete bibliographic information. Summaries will be published prior to the meeting by the ERIC Center at Ohio State University.

Symposium proposals should list all participants on the cover sheet. The summary should address itself to the individual presentations and to the thread that ties the symposium papers together. The total symposium summary including summaries of individual presentations, must be limited to a maximum of 500 words.

A cover sheet and summary should be submitted for each paper in a paper set. The author of each paper should be identified in the proposal and the order of presentation of the papers provided.

### Checklist of the materials to be included in a program proposal:

- one copy of the completed cover sheet
- four copies of summary containing not more than 500 words (without author identification)
- two self-addressed, stamped envelopes (These will be used to acknowledge receipt of the proposal and to notify contributors of the decision of the Program Committee)

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### CLASSIFICATION NUMBERS

- |                                       |  |
|---------------------------------------|--|
| 01--Teacher Education - Preservice    | 07--Curriculum Development/Evaluation  |
| 02--Teacher Education - Inservice     | 08--Research Methodology               |
| 03--Teacher Behaviors/Characteristics | 09--Instrument Development and Testing |
| 04--Student Behaviors/Characteristics | 10--Scientific Literacy                |
| 05--Instruction                       | 11--General Research                   |
| 06--Learning Theory                   |  |



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206 Memorial Hall  
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