



NARST

Newsletter

Vol. 17, No.2 NEWSLETTER OF THE NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING May, 1975

+++++ FROM THE PRESIDENT'S DESK +++++

While most of us are caught up in the process of bringing an academic year to an end, it really is the beginning of the year as NARST views its calendar. Our recent annual convention marked the beginning of a new year and already many activities are underway. In addition to the annual change in officers, new committees for the coming year have been appointed. The total number of people serving the Association as officers or committee members numbers over eighty. (The complete list of the leadership team appears elsewhere in the Newsletter). A group as large and talented as this one should be able to produce some significant results for you.

The many activities of your Association probably are evident to everyone who attends our annual conventions or reads the various issues of this Newsletter. Most of these activities need no further mention here. There are two matters, however, which constitute future changes, or potential changes, for use in the coming year and deserve further attention here. One is the change from an elected Secretary-Treasurer to an appointed limited term Executive-Secretary and the second is the current consideration of a possible affiliation with the National Science Teachers Association.

The change to an appointed Executive Secretary has been approved by your vote and the process of seeking a person for this office has been initiated. Both the results of your vote and the call for applications for the new position are reported in more detail elsewhere in this Newsletter. This move has the potential of substantially helping the work of NARST in that it provides a process for systematically selecting someone to handle the business affairs of the Association who has both the necessary organizational and managerial skills as well as the needed support from his institution to get the job done without undue stress and strain. If you believe that you have the desired interest and abilities and can obtain the needed substantial support from your institution, I would encourage you to look further into the possibilities of applying for the position.

A second matter deserves the attention of all members, namely the potential affiliation of NARST with the much larger but considerably younger National Science Teachers Association. At its meeting in November, your Board must decide what, if any, steps should be taken toward this affiliation. Current sentiment among the members of the Board is generally, but not unanimously, in favor of this affiliation. The Board does not want to move in this direction, however, without some indication of the views of the membership at large. For this reason, an item has been included in this Newsletter which provides you with detailed information about the possible affiliation and an opportunity to express your views to the Board. I strongly urge you to read this material carefully and convey your considered judgment to the Board via the ballot provided.

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From the President's Desk continued

If you have viewpoints related to these two moves or any other NARST-related matters which you would like to express to your officers, please feel free to contact us. We would be happy to hear your viewpoints and suggestions for activities which NARST could undertake. Good luck in bringing this academic year to a successful close and best wishes for the new year with NARST.

Ronald D. Anderson
President, 1975-76

POSSIBLE AFFILIATION WITH NSTA

As announced in the fall Newsletter, discussion has been underway concerning a possible formal affiliation with NSTA. These discussions included two meetings in Washington, D.C. involving Past President Robert Yager and NSTA staff, officers, and NSTA's committee on structure. These discussions, which were initiated by NSTA, led to a report which the Executive Board considered in its meeting on March 17 and is reported elsewhere as a part of the summary of minutes. As noted there the Executive Board (with six affirmative, two abstentions and one negative vote) expressed a positive initial reaction to the proposal. In an attempt to insure that the desires of the total membership are known, the Executive Board voted to conduct a preferential referendum concerning affiliation prior to taking any formal action. The information below is included to provide you with more complete information and give you a basis for expressing your preference. You are urged to make your preference known by completing the ballot appended here and returning it within a month to President Ronald Anderson.

The Proposal:

The NSTA Board of Directors has voted to establish seven new divisions (actually Standing Committees). Four of these divisions would represent educational levels, i.e. elementary, middle school, high school, and college teaching, while three would represent functions, i.e. research, teacher education, and supervision. The chairperson of each of these divisions would be an elected official (thereby replacing the directors-at-large which currently characterize the NSTA Board). Each of the Divisions would also include one of the District Directors of NSTA. Six members of each Division would be appointed.

The current responsibilities of the Research Division include the following:

It shall search for practical ways by which NSTA can promote quality research on science teaching and accelerate its effective application; suggest NSTA studies; submit an annual report to the Board of Directors including recommendations for action; upon request critically review NSTA research proposals and offer suggestions for strengthening them; review research projects being conducted by NSTA staff or under NSTA auspices; and from time to time conduct special studies as directed by the President, requested by the Board of Directors, or initiated by itself and approved by the Board.

Whenever appropriate, separate organizations (to be called Division Affiliates) would be invited to participate in the organization and the work of these Divisions. CESI would become the Division Affiliate for the Elementary Division, AETS for Teacher Education, NSSA for Supervision, and NARST for Research. What would being a Division Affiliate mean?

The NSTA Board has passed the restructuring plan. It must also be approved by the NSTA membership -- presumably prior to the NSTA Board meeting next July. If approved (which now seems likely) all Division Affiliates would be represented on the NSTA Board of Directors. The plan calls for the Presidents of all Division Affiliates being full voting members of the NSTA Board. Further the Division Affiliates would name two members to the NSTA Division. These persons would also serve on other NSTA Committees.

continued page 3

Possible Affiliation with NSTA continued

If the NARST Executive Board were to vote to affiliate with NSTA and to become one of its Division Affiliates, the NARST President would become an NSTA Board member and two other NARST members (it has been suggested that the Past President and the Research Coordinator might be likely candidates) would be named members of the NSTA Research Division.

Although the NSTA plan is complicated and involved, NARST Affiliation with NSTA as a Division Affiliate would mean nothing more unless the NARST Board or membership at some future time wants it to mean more. A possible condition for this affiliation is that the NSTA President become a member of the NARST Board of Directors. Such a change would require a modification of our By-laws and this revision would be submitted to the NARST membership for its vote in the event that affiliation is undertaken and the above condition is presented. Much of the concern of the affiliation has centered upon what might happen in the future. Basically the proposal (in the most limited sense) would mean NARST would be an affiliate of NSTA much as it currently is of AAAS. NARST currently is not affiliated in any formal way with AERA and several members have suggested that a "counter-balancing" affiliation with AERA would be appropriate if we are to affiliate with NSTA. This possibility now has been explored and there apparently is no mechanism for such a formal affiliation.

Before proceeding to make a decision on affiliation with NSTA, the Board would like to receive information on your preferences in the matter. With this desire in view the following statement of pro and con arguments is presented followed by a preference ballot for you to complete and return.

Affiliation: Pro

The obvious advantages of affiliation include participation in the broad community of science education, thereby having the opportunity to influence activities and actions. It provides an opportunity for a larger forum -- all 25,000 NSTA members. It means being involved as an organization with research information and know-how. Being represented on the NSTA Board and in its committee promises an influence not available to us at present. It provides an opportunity for NARST to assist another organization in undertaking efforts which will promote the utilization of research results, a function which is not a direct responsibility of NARST but which most of its members view as important.

Affiliation: Con

The major argument against the proposal is that it does not really enable NSTA to do anything that it could not just as easily do on its own, but in the process NARST may be moved away from its primary purpose, i.e. the promotion and improvement of science education research. NSTA can appoint competent researchers to its Research Division (such people are almost sure to be NARST members anyway) and proceed to seek attainment of their goals. NARST is a 50 year-old, healthy, active, and independent organization and the potential benefits of affiliation do not compensate for the potential losses.

NARST-NSTA Affiliation Preference Ballot

_____ Move ahead with plans for affiliation with NSTA.

_____ Stop further discussion and plans for affiliation with NSTA.

Return ballot to: Ronald D. Anderson
School of Education
University of Colorado
Boulder, Colorado 80302

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING
1975-76 Leadership Team

<u>EXECUTIVE BOARD</u>	<u>Term Expires</u>	<u>BOARD MEMBERS</u> continued	<u>Term Expires</u>
President -	1976	James R. Okey	1977
Ronald D. Anderson School of Education University of Colorado Boulder, Colorado 80302		School of Education Indiana University Bloomington, Indiana 47401	
President Elect -	1976	Glenn Berkheimer	1978
O. Roger Anderson Department of Science Education Teachers College, Columbia University New York, New York 10027		E37 McDonel Hall Michigan State University East Lansing, Michigan 48823	
Secretary-Treasurer -	1976	James Joseph Gallagher	1978
Paul E. Bell Division of Academic Curriculum and Instruction Pennsylvania State University University Park, Pa. 16802		College of Environmental and Applied Science Governors State University Park Forest South, Illinois 60466	
<u>STANDING COMMITTEES</u>			
		<u>POLICY ADVISORY</u>	<u>Term Expires</u>
Immediate Past President -	1976	Robert E. Yager, Chairman	1976
Robert E. Yager Science Education Center University of Iowa Iowa City, Iowa 52242		Science Education Center University of Iowa Iowa City, Iowa 52242	
Research Coordinator -	1977	Rita W. Peterson	1977
Stanley Helgeson Faculty of Science Education Ohio State University Columbus, Ohio 43210		Department of Teacher Education California State University Hayward, California 94542	
Editor -	1979	Charles R. Granger	1976
David P. Butts, Ex Officio Science Education University of Georgia Athens, Georgia 30601		Department of Biology University of Missouri St. Louis, Missouri 63121	
		O. Roger Anderson	1976
		Department of Science Education Teachers College, Columbia University New York, New York 10027	
<u>BOARD MEMBERS</u>	<u>Term Expires</u>	<u>FINANCIAL ADVISORY</u>	<u>Term Expires</u>
Richard L. Sagness	1976	Glenn Berkheimer, Chairman	1978
Science Education University of South Dakota Vermillion, South Dakota 57069		E37 McDonel Hall Michigan State University East Lansing, Michigan 48823	
Marvin Druger	1976	Arthur White	1978
800 Biological Research Laboratories Syracuse University Syracuse, New York 13210		Science Education Ohio State University Columbus, Ohio 43210	
Betsy A. Balzano	1977	Bernard W. Benson	1977
Dept. of Curriculum & Instruction State University of New York Brockport, New York 14420		School of Education University of Tennessee Chattanooga, Tennessee 37401	

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING - 1975-76 LEADERSHIP TEAM continued

FINANCIAL ADVISORY Term Expires
 continued

Paul E. Bell 1976
 (Secretary-Treasurer), Ex Officio
 Division of Academic Curriculum
 and Instruction
 Pennsylvania State University
 University Park, Pa. 16802

David H. Ost 1976
 Science Education
 California State College - Bakersfield
 Bakersfield, California 93309

PUBLICATIONS ADVISORY Term Expires

Richard L. Sagness 1976
 Chairman, Science Education
 University of South Dakota
 Vermillion, South Dakota 57069

Elaine J. Anderson 1978
 Wisconsin Research & Development
 Center for Cognitive Learning
 1025 W. Johnson Street
 Madison, Wisconsin 53706

Patricia E. Blosser 1976
 Science and Mathematics Education
 Ohio State University
 Columbus, Ohio 43210

Vincent N. Lunetta 1977
 Science Education Center
 University of Iowa
 Iowa City, Iowa 52242

David P. Butts 1979
 (Editor) Ex Officio
 Science Education
 University of Georgia
 Athens, Georgia 30601

PROGRAM Term Expires

O. Roger Anderson 1975
 Chairman
 Department of Science Education
 Teachers College, Columbia University
 New York, New York 10027

Russell Yeany
 Dept. of Secondary Education
 Southern Illinois University
 Carbondale, Illinois 62901

PROGRAM continued Term Expires

Carl F. Berger 1977
 College of Education
 University of Michigan
 Ann Arbor, Michigan 48104

Paul Beisenherz 1976
 College of Education
 Louisiana State University
 New Orleans, Louisiana 70126

John Schaff 1976
 College of Education
 University of Toledo
 Toledo, Ohio 43606

Stanley Helgeson 1977
 (Research Coordinator), Ex Officio
 Faculty of Science Education
 Ohio State University
 Columbus Ohio 43210

RESEARCH Term Expires

Stanley Helgeson 1977
 (Research Coordinator), Chairman
 Faculty of Science Education
 Ohio State University
 Columbus, Ohio 43210

Edward Smith 1978
 Michigan State University
 E37 McDonel Hall
 East Lansing, Michigan 48824

William Torop 1976
 Department of Chemistry
 West Chester State College
 West Chester, Pennsylvania 19380

Paul G. Koutnik 1977
 Mid-Continent Regional Educational Lab
 104 East Independence Avenue
 Kansas City, Missouri 64106

ELECTION Term Expires

Robert E. Yager, Chairman 1976
 Science Education Center
 University of Iowa
 Iowa City, Iowa 52242

Gene E. Hall 1976
 University of Texas at Austin
 3.214 Education Annex
 Austin, Texas 78712

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING - 1975-76 LEADERSHIP TEAM continued

ELECTION continued Term Expires

J. Myron Atkin 1976
 University of Illinois
 Education Building
 Urbana, Illinois 61801

SPECIAL COMMITTEES

JRST AWARD Term Expires

Calvin W. Gale, Chairman 1976
 Office of Teacher Education
 Michigan Technological University
 Houghton, Michigan 49931

Donald E. Riechard 1976
 Division of Educational Studies
 Emory University
 Atlanta, Georgia 30083

Jack E. Sherman 1976
 School of Education
 University of Colorado
 Colorado Springs, Colorado 80907

James R. Okey 1976
 School of Education
 Indiana University
 Bloomington, Indiana 47401

J. Dudley Herron 1976
 Department of Chemistry FWA3
 Purdue University
 West Lafayette, Indiana 47907

PATRON AWARD Term Expires

John T. Wilson, Chairman 1976
 Science Education Center
 University of Iowa
 Iowa City, Iowa 52242

James Joseph Gallagher 1976
 College of Environmental and
 Applied Science
 Governors State University
 Park Forest South, Illinois 60466

Edwin Arnfield 1976
 Macomb Community College
 14500 Twelve Mile Road
 Warren, Michigan 48093

Jack Easley 1976
 University of Illinois
 Urbana, Illinois 61801

PATRON AWARD continued Term Expires

John Koran 1976
 Curriculum and Instruction Division
 University of Florida
 Gainesville, Florida 32601

PATRON ACTIVITIES Term Expires

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 Department of Education
 University of Wisconsin-Green Bay
 Green Bay, Wisconsin 54301

Carleton W. Knight 1976
 Department of Education
 University of Delaware
 Newark, Delaware 19711

Jerry G. Horn 1976
 School of Education
 University of South Dakota
 Vermillion, South Dakota 57069

Will L. Selser 1976
 Science Education
 Northeast Missouri State University
 Kirksville, Missouri 63501

Victor J. Mayer 1976
 College of Education
 Ohio State University
 Columbus, Ohio 43210

Ralph W. Lefler 1976
 Department of Physics
 Purdue University
 West Lafayette, Indiana 47901

MEMBERSHIP COMMITTEE Term Expires

Michael L. Agin, Chairman 1976
 Office of Teacher Education
 Michigan Technological University
 Houghton, Michigan 49931

Joseph Riley 1976
 College of Education
 University of Delaware
 Newark, Delaware 19711

John P. Smith 1976
 College of Education, DQ 12
 University of Washington
 Seattle, Washington 98105

Thomas G. Teates 1976
 College of Education
 Virginia Polytechnic Institute and State Univ.
 Blacksburg, Virginia 24061

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING - 1975-76 LEADERSHIP TEAM continued

MEMBERSHIP COMMITTEE Term Expires
continued

Jerrold William Maben 1976
33 Midbrook Lane
Old Greenwich, Connecticut 06870

FEDERALLY SUPPORTED RESEARCH

STUDY COMMITTEE Term Expires

Fletcher Watson, Chairman 1976
Longfellow Hall
Harvard University
Cambridge, Massachusetts 65201

Willard J. Jacobson 1976
Department of Education
Teacher College, Columbia University
New York, New York 10027

J. Myron Atkin 1976
Education Building
University of Illinois
Urbana, Illinois 61803

Ertle Thompson 1976
Science Education
University of Virginia
Charlottesville, Virginia 22901

John W. Renner 1976
College of Education
University of Oklahoma
Norman, Oklahoma 73069

Wayne W. Welch 1976
College of Education
University of Minnesota
Minneapolis, Minnesota 55455

Robert E. Yager, Ex Officio 1976
Science Education Center
University of Iowa
Iowa City, Iowa 52242

PLACEMENT SERVICES Term Expires

Alan M. Voelker, Chairman 1978
College of Education
Northern Illinois University
DeKalb, Illinois 60115

Marvin Druger 1976
800 Biological Research Laboratories
Syracuse University
Syracuse, New York 13210

PLACEMENT SERVICES Term Expires
continued

Eugene D. Gennaro 1976
370 Peik Hall
University of Minnesota
Minneapolis, Minnesota 55455

William R. Capie 1976
Department of Science Education
University of Georgia
Athens, Georgia 30601

Marvin F. Wideen 1976
Faculty of Education
Simon Fraser University, Burnaby 2,
British Columbia, Canada

Thaddeus W. Fowler 1976
Curriculum and Instruction Department
College of Education
University of Cincinnati
Cincinnati, Ohio 45221

SPECIAL APPOINTEES

REPRESENTATIVE TO AAAS Term Expires

Robert E. Collagan, Section X 1976
Department of Education
Morgan State College
Baltimore, Maryland 21212

Edward L. Pizzini, Section Q 1976
Science Education Center
University of Iowa
Iowa City, Iowa 52242

REPRESENTATIVE TO ICASE Term Expires

Carleton W. Knight 1976
Department of Education
University of Delaware
Newark, Delaware 19711

J. David Lockard 1976
Science Teaching Center
University of Maryland
College Park, Maryland 20742

REPRESENTATIVE TO NSTA Term Expires

James F. Rutherford 1976
Department of Science Education
New York University
New York, New York 10003

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING - 1975-76 LEADERSHIP TEAM continued

NEWSLETTER EDITOR Term Expires

H. Seymour Fowler 1976
Division of Academic Curriculum
and Instruction
The Pennsylvania State University
University Park, Pa. 16802

CONVENTION EVALUATOR Term Expires

Betsy A. Balzano 1976
Dept. of Curriculum and Instruction
State University of New York
Brockport, New York 14420

ERIC/SMEAC LIAISON Term Expires

Robert W. Howe 1977
Science and Mathematics Education
Ohio State University
Columbus, Ohio 43210

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Joseph D. Novak Term Expires
1976
Stone Hall
Cornell University
Ithaca, New York 14850

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Science Education Center
University of Iowa
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Michigan State University
East Lansing, Michigan 48823

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Calgary, Alberta, Canada

JOURNAL OF RESEARCH IN
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David P. Butts, Editor 1979
Department of Science Education
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Athens, Georgia 30601

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Roland Bartholomew
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The University of Texas at Austin
Austin, Texas 78712

FROM O. ROGER ANDERSON, PRESIDENT ELECT

++++ THE 1976 NARST CONVENTION +++++

Preparation for the 1976 Convention in San Francisco, California is underway and your program committee is eager to receive suggestions about program format and special sessions that may be of interest to you. Some members have suggested that evening sessions are too long and prevent adequate opportunity for exchange of ideas in informal settings. If you have alternative suggestions for substituting the formal evening session with a more appropriate format, please send your suggestions to the program committee Chairman, Roger Anderson. We will be meeting immediately preceding the AERA Convention to avoid conflict in program schedules and trust that your participation in our meeting will be productive and enlightening.

**CALL FOR PROPOSALS
1976 ANNUAL MEETING**

This announcement is the official call for proposals for the 49th Annual Meeting to be held in mid April, 1976 in San Francisco, California.

The 1976 program format will be similar to that of 1975 and hence will include symposia, invited talks, paper sessions, discussion papers, research training sessions and "an hour with" sessions. Papers, symposia, discussion papers, and other activities will be considered for inclusion in the program if they are received before October 20, 1975 and submitted in the appropriate form. Please note that proposals for training sessions must be submitted for review and that summaries of all proposed contributions must contain: (1) a brief statement of the theoretical or conceptual rationale for the proposed contribution, (2) a concise, but clearly stated summary of the methods used in the research or the proposed specific topics to be presented in the case of training sessions, and (3) results obtained in research and their significance.

All NARST members are invited to submit proposals for consideration by the Program Committee. Your proposal can be for any of the following six types of sessions.

1. CONTRIBUTED PAPERS - Sessions devoted to contributed papers provide individual members with an opportunity to share the results of their individual research efforts with other members. Concurrent sessions where such Contributed Papers can be scheduled represent a major part of the NARST meetings. Generally such papers are restricted to a fifteen to twenty minute presentation which includes any audience questioning as well.

CALL FOR PROPOSALS - 1976 ANNUAL MEETING continued

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 six separate but related reports. Such a grouping of papers often allows for common elements of design or approach to be presented once instead of several times. A paper set grouping can also allow for a division of a single report which represents a major research effort in terms of time, number of workers, and/or geography.
3. DISCUSSION PAPERS - Some research reports merit more time and consideration by the membership than do others. Discussion papers represent intriguing, exciting, and perhaps controversial reports of research submitted by NARST members. A whole time block on the program will be scheduled where members in small numbers can carefully analyze and discuss the paper. There will be no "presentation" concerning the paper. Instead copies of the paper will be available at the Registration Table. Members will secure a copy of the paper that interests them, read it, and attend the particular session ready to "discuss" the issues, the analyses, the results, and the interpretations.
4. SYMPOSIA - Areas of current research or research needs should be identified and members of the symposium asked to prepare papers addressing themselves to defined 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 presentors, other discussant, and the audience is anticipated. Varying views, approaches, data reports, and data interpretation are desirable features for symposia.
5. 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.
6. TRAINING SESSIONS - Most of our members are relatively sophisticated in general research design, but often seek mature knowledge of alternative ways of generating and analyzing data. These sessions should contain a thorough and sophisticated treatment of a research methodology presented in a mode that complements the sophistication of the audience. The program committee seeks proposals that include a survey of the theoretical framework underlying the methodology with annotated bibliography citing pertinent literature, and a thorough presentation of the basic procedures to be used in the methodology. We are eager to include training sessions of this kind in our 1976 program.

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

Proposals must be submitted on the enclosed forms. They 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 (attached) and four copies of a 500-word (maximum) summary of the study. The summaries will be published prior to the meeting by the ERIC Center at Ohio State University.

The summary of a research paper should be organized under the following headings:

- Objectives and theoretical rationale for the inquiry
- Methodology and design
- Data and its sources
- Results and conclusions
- Significance

Symposia proposals should be submitted as a package listing 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 summary including summaries of individual presentations, must be limited to a maximum of 500 words.

CALL FOR PROPOSALS - 1976 ANNUAL MEETING continued

In the case of paper sets, a cover sheet and summary should be submitted for each paper in the set.

Please enclose two self-addressed, stamped envelopes for prompt acknowledgment of proposal receipt and for notification of the decision of the Program Committee.

All proposals should be mailed by October 20, 1975 to the program chairman:

O. Roger Anderson
Science Education Department
Box 210
Teachers College, Columbia University
New York, New York 10027

Here is a checklist of the materials to be submitted:

- one copy of cover sheet
- four copies of a 500 word (maximum) summary (without author identification)

Please note the format requested by the Program Committee as listed above and in the introduction to this announcement.

- two self-addressed stamped envelopes

CLASSIFICATION NUMBERS:

- | | |
|---|--|
| 01 Administration and Supervision | 06 Testing and evaluation |
| 02 Curriculum development and/or evaluation | 07 Laboratory learning |
| 03 Learning theory and processes | 08 Analysis of science teaching |
| 04 Research methodology | 09 Teacher education |
| 05 Science and society | 10 General research in science education |

SEE LAST PAGE OF NEWSLETTER FOR COVER SHEET FOR PAPER OR SYMPOSIUM PROPOSAL - NARST 1976

MATERIALS RECEIVED.....

KANSAS ASSOCIATION OF TEACHERS OF SCIENCE: Newsletters and Announcement of Annual Spring Meeting. KAST is an active group of science teachers.

MICHIGAN STATE UNIVERSITY: Announcement of NSF Sponsored Leadership Specialists Summer Workshop. For further information contact: Glenn Berkheimer, Science and Mathematics Teaching Center, Michigan State University, East Lansing, Michigan 48824.

INTERNATIONAL UNION OF BIOLOGICAL SCIENCES: Biological Education Newsletter, Number 1, January 1975. For further information contact F. C. Vohra, Division of Pre-University and Technology Education, UNESCO, Paris, France.

WORLD FUTURE SOCIETY: Announcement of Meeting, Second General Session, Washington, D.C., June 2-5, 1975. For further information write WFS, 4916 St. Elmo Avenue (Bethesda), Washington, D.C. 20014.

AFFIRMATIVE ACTION REGISTER: Lists opportunities for female, minority and handicapped candidates. Address: AAR, 10 South Brentwood Blvd., St. Louis, MO 63105.

THE GEORGIA SCIENCE TEACHER: A good journal for science teachers. Contact Ronald D. Simpson, Editor, Department of Science Education, University of Georgia, Athens, GA 30602.

GUAM RAIL: Two issues of the Guam Science Teachers Association. One of the better Association Newsletters. Ideas for science teaching, news, and excellent articles. This newsletter competes in a class with the best of those received by NARST.

* * CALLS FOR PAPERS * *

Jointly sponsored sessions - NARST-AERA-SIG (Science Related Social Issues) Group.

Title of Session: "Teaching of Science Related Social Issues; Research Progress."

Submit to: Robert L. Steiner, Program Chairperson, 1945 N. High Street, 244 Arps, Columbus, OH 43210. Use either NARST Form or May Issue 1975 AERA Researcher Form.

AN ANNOUNCEMENT FROM THE U.S. SECRETARY OF COMMERCE

The President has asked that Federal, state, and local governments and private employers revitalize their efforts on behalf of the returned Vietnam era veterans and those about to be discharged servicemen and women.

Public interest and public concern for the Vietnam era veteran did not end with the cessation of hostilities in Vietnam. Nor should it. Almost nine million men and women, some two million of whom are still in uniform, make up the Vietnam era veteran population. They are a significant part of America's working age group 20-35.

Today there are approximately 300,000 veterans in this age group who are unemployed and seeking work. Virtually every veteran, no matter in which branch of the armed forces he served, received valuable training, and developed skills and disciplines that are needed in industry today.

Eighty percent of all veterans have received training in one or more of 1500 military skills that have direct and comparable relationship to civilian needs. A veteran is a good bet for a good employee.

The National Alliance of Businessmen has been specifically organized by the business community to work with the government agencies in implementing the President's Veterans Program in the private sector.

I urge you to call the President's Veterans Program to the attention of your members and encourage them to give added and renewed support to this worthwhile endeavor. Your cooperation in this regard will be deeply appreciated.

PUBLICATION AVAILABLE

We at National Assessment feel that you will enjoy seeing and benefit from having a complimentary copy of "National Assessments of Science, 1969 and 1973: A Capsule Description of Changes in Science Achievement," our most recent reports on results of the second science assessment. This is available for 75¢ from the Education Commission of the States, 300 Lincoln Tower, 1860 Lincoln Street, Denver, Colorado 80203. It is recently off-press and is unique in that science is the first learning area reassessed and the first report showing change data.

As you probably are aware, NAEP is a project of the Education Commission of the States and is funded by the National Center for Education Statistics. Each year two learning areas are assessed and the results of those assessments are published and disseminated to a wide variety of audiences, especially educators and educational decision and policymakers.

We are particularly pleased with the "Capsule Description of Changes in Science Achievement" and hope you will share our enthusiasm for what we believe to be a more concise, more attractive style of reporting our findings. In fact, we will welcome your comments. Our goal is to make our reports as meaningful and useful as possible and critical responses from you and your colleagues in the profession will always be appreciated.

REQUEST FOR ASSISTANCE

The Research Committee is soliciting suggestions for topics to be considered as the basis for papers for the 1976 Patron's Award. The topics are to be drawn from areas of needed research in science education. Please send your suggestions to:

Stanley L. Helgeson
Faculty of Science and Mathematics Education
The Ohio State University
Columbus, Ohio 43210

VOELKER NAMED NEW PLACEMENT COORDINATOR

Marvin Druger offered his resignation as the NARST Placement Coordinator. The board regretfully accepted the resignation and commended Marvin for a job well done.

Alan Voelker, Northern Illinois University, was named to a three year term as the new Placement Coordinator. All inquires, all information from employers and potential employees, and suggestions for improving the NARST Placement Service should be directed to Al Voelker. We all look forward to this new leadership while appreciating all that Marv has done during the past several years.

YOUR SECRETARY received the following note from Ryda D. Rose. If you want to share information about the proposal for action write to: Ryda D. Rose, 346 Winding Way, Merion Station, PA 19066 and carbon your Secretary, Paul Bell, 179 Chambers Building, University Park, PA. 16802: "Paul, Just a suggestion that we share advice and immediate problem-solving with colleagues through medium of Newsletter, perhaps in a column entitled...'What are You Doing About...Problem...?' Since research reports are 2-3 years until they see the 'printed light' - Things are happening in labs and in field that could be shared long before the publishing - e.g. what are researchers and curriculum consultants like myself doing about standardized science testing of students who have gone through SAPA, SCIS, or ESS - type programs? Government funding agencies require a nationally - normed, standard test like Stanford, etc., but such don't measure what we're teaching in these programs; so administrators have to make decisions - to give or not to give tests - or go back to ol'textbook read-science. Is anybody working on a government-approved measure, or just what agencies accept the SAPA competency measures attainment as a basis for future funding...we're in a spot we could do something about if we raised a common voice."

AN ANNOUNCEMENT FROM THE FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

H. Guyford Stever, Science Adviser and Chairman of the Federal Council for Science and Technology (FCST), today announced a revised FCST policy on page charges for publication of research results stemming from Federally funded research projects.

The new policy statement says: "Scientific policy representatives of Federal agencies that constitute the Federal Council for Science and Technology have established the following criteria for honoring page charge bills submitted by journal publishers:

- (1) The research papers report work supported by the Government.
- (2) Mandatory or voluntary page charge policies are acceptable, provided that the page charge policy for the publication is administered impartially for Government and non-Government sponsored research reports.
- (3) The journals involved are not operated for profit."

This policy represents a change from the original 1961 policy in the following areas:

- (1) the original criterion number 3 has been deleted (this criterion stated "payment of such charges is in no sense a condition for acceptance of manuscripts by the journals.")
- (2) Original criterion number 2 has been modified as stated above to reflect the acceptability of mandatory page charge policies.
- (3) the original criterion number 4 has been renumbered to become criterion (3) in the revised statement.

IN MEMORIUM

Bernadine Melanson, Associate Professor of Science Education at the University of Saskatchewan, Regina, Saskatchewan, Canada, died January 9, 1975. She was a tenured professor and died quite young. A Memorial Fund has been established for Ms. Melanson. Those interested in knowing more about the fund should write The Melanson Scholarship Fund, c/o Dean W. Toombs, Faculty of Education, University of Regina, Regina, Saskatchewan, Canada, S40A2.

Judith F. Keiser of Stanford reports that Ms. Melanson was a graduate student at Stanford and was highly thought of there. Ms. Keiser reports that she was a very creative and energetic person. Ms. Melanson was a member of NARST and she will be missed by those who knew her. NARST expresses its sympathy to friends and relatives.

////// INFORMATION FROM ROBERT E. YAGER, PAST-PRESIDENT: //////

SUMMARY OF MINUTES:

The following items of business were conducted at the Spring Meeting of the Executive Board which met 7-10 p.m., March 16 and 8-12:30 p.m. on March 17.

The changes in the by-laws as recommended by the Policy Committee were approved.

The results of the mail vote concerning an increase in dues was reviewed.

The budget was reviewed and tentative changes for the 1976 budget were discussed. The board decided to continue the practice of the fall meeting of the Board.

The report of the editor was reviewed and accepted.

Reports from all standing committees were received.

Extensive discussion centered on the Publication Committee report concerning the new Investigations in Science Education series.

The results of the election were announced. O. Roger Anderson is the new president-elect and Glenn D. Berkheimer and James Joseph Gallagher are new Board Members elected to three year terms.

Reports from all special committees and special appointees were received as printed in the Board Book.

The Board voted to drop the associate membership category. The Policy Committee was directed to prepare the necessary changes in the By-laws to implement the change. These by-laws changes will be voted on by the new Board in the fall and, if passed, referred to the total membership for action in December.

The work of the Placement Committee and the Placement Coordinator was considered. Marvin Druger announced his desire to retire. Alan Voelker was appointed as the new Coordinator for a three year term.

The proposed affiliation with NSTA as a division affiliate was discussed. The Board voted in favor of the proposed affiliation. However, some concern by Board Members and other members was noted. It was decided that the issue should be referred to the membership for a preferential vote to be conducted this spring. Final Board action will be taken in November.

A possible affiliation with AERA was also discussed.

James Okey was selected as the Chairman of the Search Committee for the new Executive Secretary upon approval of the By-law change. A proposal from Drake University was referred to this new committee.

The recommendation of the Vaden Miles Memorial Committee was received. The establishment of a special lectureship fund was approved as a new feature of the Annual Meeting. The 1976 Special Lecture will be called the Vaden Miles Memorial Lecture.

The Executive Board authorized a special three year program of recognition for Charter Members of NARST. The first to be recognized are Francis D. Curtis and Gerald S. Craig.

The report of the Special committee concerning the teaching of science related social issues was received with encouragement for several new activities -- but without financial support.

The committee appointments for 1975-76 were proposed by President-Elect Ron Anderson and approved.

The NARST Committee for Establishing Priorities for Research in Science Education:

The National Institute of Education has funded a three day meeting of a special committee appointed by President Bob Yager for establishing research priorities in the field. The committee consists of: Fletcher Watson, Chairman; Myron Atkin, Willard Jacobson, John Renner,

Ertle Thompson, Robert Chesley, ex officio (NIE); Wayne Welch, ex officio (NARST); and Robert Yager, ex officio (NARST).

A draft document was prepared and circulated to the committee and the NARST Executive Board. Following feedback from this effort a second draft was prepared. This second draft was available at the Annual Meeting in Los Angeles. Further copies are available from persons not in attendance by sending one dollar to Professor George C. Turner, California State University, Fullerton, California 92674, and requesting a copy.

Suggestions from nearly two hundred members were received in Los Angeles. Other input is requested from the whole membership. All members are asked to send all suggestions to Fletcher Watson, Chairman of the special committee.

After review of all comments from the Los Angeles meeting and all written comments, the committee will prepare a third and final draft of the paper.

This third draft will be forwarded to the National Institute of Education and the National Science Foundation for their consideration. It is planned that the draft will be published, either in JRST or as a special publication. The Executive Board may formally endorse the report at its meeting in November.

The specific recommendations of the committee include the following eight priorities:

Antecedents

1. Teachers are a most significant component in any teaching. They choose and pace the instruction, establish the reward system, and create the classroom climate within which students interact with materials, peers, and teachers. In the extreme, the teacher becomes the curriculum.

The self-image and aspirations of teachers, and their images of science, of children, of learning, and of effective activity are suspected of being highly predictive of the kinds and effectiveness of the transactions which occur in schools and the subsequent outcomes. Therefore, teacher characteristics and their influence upon the transactions and outcomes has the highest priority for research.

Such teacher characteristics can be divided into two aspects: those so innate in the teacher that they are considered immutable, and those acquired characteristics which seem potentially changeable. Knowledge of how the innate characteristics influence students' behavior would be applicable to initial teacher acceptance and certification criteria. Knowledge of tractable characteristics is applicable to the preservice and inservice experiences intended to alter the perspective and thus the behavior of teachers.

Independently, but simultaneously, the NARST Committee on Research has assigned the highest priority to "empirical tests of the relationships between teacher attitudes and performance of specific tasks and the outcomes of student attitudes and performance of other specific tasks."

2. Studies of the growth and change behavior of students, who are the consumers of the educational efforts, are of comparable priority. Among students the wide diversity of antecedent backgrounds, interests, competencies, and expectations present a multiplicity of bases for studies. Of particular importance is the relation, if any, between these antecedent characteristics and the outcomes of various transactions which are amenable to control in school. With increased attention now being given to small group and to individualized instruction, the efforts of individual student characteristics are of increasing concern.

The NARST Committee on Research has also given high priority to students and their learning by focussing upon: "determining the effective ways of getting students to achieve with certain modes of learning, e.g. pictorial vs. written vs. laboratory etc., to improve individualized instruction."

3. The social imperatives of education and especially of science education have recently been attributed with new importance and urgency. The long-term social problems of environmental pollution, food shortages, limitations on available energy, and expanding populations demand changes in curricular emphasis and modes of teaching. Scientific data, appraised for pertinancy and precision, provide the basis on which necessary social decisions are made. But not only do students need to be informed about these social problems, they also need practice in making decisions so that as adults they will be wiser in individual and collective decision-making.

The NARST Committee on Research also included such decision-making among its priority areas of study.

Since these social imperatives do not conform to the traditional academic boundaries of the sciences, or even of any of the subjects commonly taught in school, new curricular patterns must be generated, developed, tested, and evaluated for evidence of effectiveness.

Relevant research would include not only the development and testing of new instructional materials, but more basic studies of the ways, means, and amounts of various experiences which modify the attitudes of students and enhance their decision-making skills. Careful studies are needed, for attitudes and their associated values are mediators between knowledge and action. Such study of attitude formation and modification, and of developing decision-making skills will be difficult for an Anastasi observed: "the measurement of attitudes is both difficult and controversial." If education in science is to become increasingly socially responsible, the conditions influencing decision-making must be understood through new research.

Transactions

Transactions are the actions and concurrent emotional conditions intended to provoke learning. They establish the procedures and climate for learning. Also they are more amenable to control and change than are the antecedents.

4. Pedagogy, the act of teaching and encouraging learning, is of central importance. How instruction is done, by what kind of teacher, to what kind of student influences the outcomes of the science education program. Despite myriads of studies on the effects of teaching with differing styles, materials and students, few credible and applicable results are available. Because we persist with the assumption that the pedagogy is important, the paucity of clearly established inter-relations suggests that we have been asking the wrong sort of questions. While the commonplace pre-post appraisal of long-term instruction may be adequate to describe the overall effects of instruction, it is too gross to reveal the moment-to-moment incremental learnings which integrate to the total. More detailed and individualistic studies, perhaps in the form of case histories, could pinpoint the moment-to-moment individual gains and losses. In terms of cost effectiveness and prescribed competencies, more detailed studies of the reactions of diverse students to specific inputs seem essential.

5. A social climate of expectations, behaviors, and interactions exists in every classroom. Within the general ambience of the school, the climate in each classroom is shaped by the characteristics of the teachers and the students. Only a few studies have explored how the characteristics of teachers and of students mix to produce various classroom climates and also how those climates influence the learning and attitudes of diverse students. Clarification of the influence of the classroom climate is important, for it establishes, or at least modifies, the affective orientation and attitudes students carry from school regarding science. Since there is continued concern about the attitudes of students and the public toward science, careful studies of the conditions under which those attitudes are formed or reformed at various ages are important.

6. The implementation of durable changes in the outcomes, curriculum and methodology of science education is a topic of persistent concern because further changes, perhaps of more dramatic kinds, are inevitable. How much of what type of information is needed by whom, when, and in what sequence to lead to durable changes? What role is taken by various individuals and groups in the decision-making process regarding the curriculum and the pedagogy? We don't even know why so many schools and teachers say "no" to implementing potential changes. While the implementation of change is of concern in all educational areas, the understanding of such implementation is especially important in science education which is, because of the new social imperatives, in a state of considerable flux.

Outcomes

Among the Outcomes of science education two seem now to be of greatest importance for research activity.

7. Knowledge of the attitudes of students, and the determinants in those attitudes during schooling, toward science and the interaction of science and society is of critical importance if the social imperatives cited above are to be considered seriously. When and how such attitudes are formed: in school, in the home, elsewhere, and how they may be modified, if at all, by school experiences is essentially an unexplored subject. In adult life decisions are often more influenced by attitudes than by specific information. Therefore, as noted before, the study of attitude formation must be assigned high priority.

8. Cognitive growth and the development of logical thought continue to be centrally important as outcomes of education in science. While knowledge of the things and events occurring in the world remain basic to cognitive development, a better understanding of the process by which students synthesize information into generalizations and large conceptual schemes continues central to improving education in science. Continued restatement of specific goals and emphases appropriate to the changing role of science education should be encouraged. The diversity of experiences, of student characteristics, and of classroom climates, as well as the potential effectiveness of peer interaction are among the variables requiring more careful investigation. Potential sources of theoretical premises and investigatory procedures may be found in psychology, sociology, and anthropology.

This is the chance for all members to comment. Send all suggestions to Fletcher Watson (Longfellow Hall, Harvard University, Cambridge, Mass. 65201) as soon as possible! The Committee expects to complete its task well before the time of the fall meeting of the Board.

NOMINATIONS FOR NEW OFFICERS INVITED

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All members of NARST are urged to forward the names and addresses of members they would like to nominate for office for 1976. The election committee is headed by our Past President Bob Yager. You should send your recommendations to him (Science Education Center, University of Iowa, Iowa City, Iowa 52242). The election committee includes Gene Hall of Texas and Myron Atkin of Illinois.

The list of nominees proposed by the Election Committee will be published in the next Newsletter. At that time others can be nominated by petition if the work of the Election Committee is not endorsed by the membership. Biographical information concerning all candidates will be published in a later Newsletter. The actual election will occur during January.

ROBERT E. YAGER, CHAIRMAN, POLICY ADVISORY COMMITTEE REPORTS.....

Now that all votes that were mailed by the April 1 deadline have been tabulated, it is possible to announce the vote concerning our recent balloting on the revision of our NARST By-laws. A total of 157 ballots were returned by members. The vote was as follows:

<u>Change is underlined</u>	<u>Yes</u>	<u>No</u>	<u>No Vote</u>
Section I.B -- <u>Delete</u>	153	3	1
Section III.C -- Candidates for office of president-elect must have been <u>active members of the Association. This will usually mean a member of the Executive Board or chairman of a standing committee.</u>	147	10	0
Section III.A.4 -- <u>Executive Secretary, who shall...</u>	152	5	1
Section III.C -- The <u>Executive Secretary shall be appointed by the Executive Board to a five year term.</u>	151	5	1
Section V... the members present <u>(with a minimum of 5% of the total membership shall...</u>	151	5	1
Change Secretary-Treasurer to <u>Executive Secretary</u> as editorial change.	151	6	0

It is obvious that all suggested changes in the By-laws have been approved by the membership. New copies of the revised By-laws are now available and are being studied by the Policy Committee for consideration of additional changes during 1975-76.

=====RESEARCH AREA FOR 1976 NARST PATRON'S AWARD=====

The NARST Patron's Award was designed to solicit research proposals from the NARST membership which (a) define major problems in science education and (b) delineate procedures for investigating them. Each year, a general topic is identified and announced by the NARST Research Committee. The topic for the second NARST Patron's Award is as follows:

Relationships of individual student characteristics to learning outcomes when utilizing different modes and patterns of science instruction.

This topic reflects many of the research concerns described in the NARST-NIE report. Student characteristics, for example may well include attitudes, personality factors, social-economic backgrounds, as well as various cognitive factors. Learning outcomes could also include many variables described in the report and are not limited to the acquisition of science knowledge and information. Science instruction also may consider a variety of teaching styles, instructional patterns, and modes of presentation and materials.

The proposals should be consistent with the following guidelines:

1. The problem to be studied shall be well defined.
2. The conceptual framework from the problem arises shall be described.
3. An adequate research base for the problem shall be identified and summarized.
4. At least two effective strategies (or measures) for studying the problem shall be specified.
5. Any proposed design shall be experimental or quasi-experimental, permitting control and manipulation of variables.

RESEARCH AREA FOR 1976 NARST PATRON'S AWARD continued

The proposal should provide an original and scholarly approach to the problem and should be of such a length as to appropriately develop the topic.

Proposals should be submitted to the Chairman of the Patron's Award Committee by January 15, 1976. The award recipient will be announced at the 1976 NARST annual meeting. A specific set of guidelines for interested NARST members describing specific submission procedures, proposal format guidelines, and a description of the rating procedures for the 1976 NARST Patron's Award will be available after May 10th, from John T. Wilson, Chairman of the 1976 NARST Patron's Award Committee, 787 Physics Building, Science Education Center, University of Iowa, Iowa City, Iowa 52242.

=====KORAN SELECTED AS FIRST RECIPIENT OF PATRON'S AWARD=====

John J. Koran, Jr., Head of Science Education at the University of Florida, was selected as the first recipient for the NARST Patron's Award Program. The topic for 1974-75 was selected by the Executive Board; it was "Application of Science Education Research to Classrooms". A committee headed by James Joseph Gallagher of Governor's State University evaluated all entries for the 1975 competition. Koran's entry entitled "Validating Science Teacher Training Through Student Performance" was selected as the winning entry. Koran outlined his "solution" to the problem of the year at the Annual Luncheon in Los Angeles.

Runners-up in the competition were Miles A. Nelson, University of Wisconsin-Madison and J. A. Easley, Jr., University of Illinois-Urbana. Their titles were "Questioning Questioning: A Study of the Effects of Questions Used by Science Teachers During Post-Laboratory Discussion" and "Some Fundamental Steps Toward Integration of Mathematics and Science in the Schools" respectively.

Koran was awarded a certificate and a cash prize of \$100. Koran also led a discussion concerning the implications of his "solution" to the problem of the year.

Announcement concerning the 1975-76 competition is made elsewhere in the Newsletter.

////// MARY BUDD ROWE IS NAMED RECIPIENT OF THE SECOND JRST AWARD //////

Each year a special committee selects the outstanding research contribution which appears in the preceding volume of JRST. J. Dudley Herron of Purdue University headed the committee to select the winning article appearing in Volume 11 of JRST for 1974.

Mary Budd Rowe's articles (Parts I and II) entitled as follows: "Wait-Time and Rewards as Instructional Variables, Their Influence on Language, Logic, and Fate Control: Part One--Wait-Time"; "Relation of Wait-Time and Rewards to the Development of Language, Logic, and Fate Control: Part II--Rewards" were selected as the best research reports of the year.

Mary Budd Rowe was honored at the 48th Annual Luncheon. She was awarded a certificate and a check for \$100.

The 1975 competition is already underway. A new committee headed by Calvin Gale (Michigan Technological University) will be making the selection for all articles appearing in Volume 12, 1975.

HELP LOCATE OUR NEW EXECUTIVE SECRETARY!

Jim Okey, Indiana University and a member of the current Executive Board, has accepted the Chairmanship of a special search committee for our new Executive Secretary. The By-laws were changed with the vote of the membership (votes tabulated April 1 at close of election).

All recommendations concerning the Executive Secretary position should be forwarded to Jim as soon as possible. It is hoped that the committee will have nominees soon and that the committee can reach a recommendation prior to the fall meeting of the Board in November.

The Board hopes that the new Executive Secretary will be able to have released time from his/her institution for NARST responsibilities. It will also be necessary that the home institution of the Executive Secretary indicate the availability of office space, and secretarial service -- hopefully without added expense to NARST.

The Executive Secretary will be responsible for the funds, including the budget, plans for the Annual Meeting, business matters, correspondence and records, the archives materials, and the Newsletter.

It is the hope of the Board that many members will be interested in this leadership role. Certainly an Executive Secretary is a critical appointment in terms of the Association. Now is the time to volunteer, to recommend, and to prepare firm proposals concerning the newly established office.

VOTE TO AFFILIATE WITH AERA

The Executive Board has voted to explore a closer and a formal affiliation with AERA. The membership is invited to comment upon this proposed action. Please send your opinions to President Ron Anderson. Ron has been charged with investigating specific details for a closer working relationship.

PATRON MEMBERS

Dues for 1975 are still being processed. George O'Hearn has accepted the chairmanship of the New Patron's Activities Committee. Ralph Lefler will continue as spokesman for contacting distinguished members who might desire to become Patrons.

New Patron Members for 1975 include the following:

- Mary Budd Rowe
- James Irving
- Ralph Tyler
- N. Eldred Bingham
- Paul E. Blackwood
- Horace H. Bliss
- Glenn O. Blough
- Paul F. Brandwein
- Ralph W. Lefler
- Vaden W. Miles (deceased)
- Nalge Corporation

ANNOUNCEMENT

The Lunar Science Institute wishes to make updated astronomical and geological information available to science educators in the forms of short courses, seminars and other programs. For more information, write to Ms. Pam Pascal, 3303 NASA Road, Houston, Texas 77058.

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LOST MEMBERS

- Gerald G. Neufeld, Tallahassee, Fla.
- James P. Hale, Buffalo Grove, IL
- Kathryn J. Beam, Tonawanda, N.Y.
- Joyce Cuff, Rochester, N.Y.
- George A. Garrigan, Coralville, Iowa

Mail has been returned from these persons. If you have a forwarding address, please write: Dr. Paul E. Bell, 179 Chambers Building, The Pennsylvania State University, University Park, PA 16802

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CALL FOR APPLICANTS FOR THE
POSITION OF
EXECUTIVE SECRETARY OF NARST

By action of the membership, the position of Executive Secretary of NARST has been created. This is a call for applications for the position.

It is the hope of the Executive Board that many members will be interested in this leadership role. Certainly an Executive Secretary is a critical appointment in terms of the Association. Now is the time to volunteer, to recommend, and to prepare firm proposals concerning the newly established office.

Duties: The Executive Secretary will be responsible for planning the budget, receiving and dispersing the funds of the organization, coordinating plans for the Annual Meeting, handling correspondence, keeping the current records and archives, editing the Newsletter, and working closely with the officers and committees of the organization.

Term: Five year term beginning January 1, 1976. This allows a four month overlap with the current Secretary-Treasurer to insure a smooth transition.

Nature of Applications: It is hoped that the Executive Secretary will be able to negotiate released time (at least one-fourth time) from his or her institution. In addition, it is hoped that the institution will provide office space and equipment, utilities, phone service, computer time, and part-time secretarial service. Occasional access to a small secretarial pool may be necessary to handle the work at peak times. Applications should clearly state the type of released time and services they and their institutions are willing to commit.

Procedure: Applications will be screened by the committee named below and recommendations will be forwarded to the NARST Executive Board for consideration at the November meeting.

Committee: Joe Novak, Cornell University
James Okey, Indiana University
Wayne Welch, University of Minnesota

Deadline: Send applications to this address, by July 15.

James R. Okey
School of Education
Indiana University
Bloomington, Indiana 47401

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NEWS AND NOTES FROM THE MEMBERSHIP

DAVID P. BUTTS - was the Keynote Speaker at the February meeting of the Georgia Science Teachers Association. His topic was "Are You Listening?"

JOHN J. KORAN, JR. and MARY LOU KORAN recently attended the Association of Teacher Educators convention in New Orleans where they received the ATE award for outstanding research in teacher education. Their research study was one based on a research model the Korans developed for the State of Florida which facilitated the study of the relationship of teacher behavior to student performance.

HOWARD POOLE is at Western Michigan University involved in research on Open Universities, Universities Without Walls, and Open Learning Systems. Poole asks that the members correspond with him to share their research findings.

GERALD J. GARDNER reports that he is working with the Science Office, Instructional Planning Division, Los Angeles Unified School District and serving in a management capacity with the District Secondary Science Material Center.

M. FINEGOLD is lecturer on the Technion Faculty - Israel Institute of Technology, Technion City, Haifa, Israel and there is responsible for courses in Foundations of Education, New Approaches to Teaching of Physics, and Philosophy of Science.

EDWIN L. SHAY is with the Alternative High School, Worthington, Ohio and reports his task is to develop and operate a field based science curriculum for 165 students, grades 9-12. He reports extensive use of talents of parents as well as local industry, museums, and O.S.U.'s staff and facilities. Shay reports that an alternative school is a place to go from rather than a place to go to.

ROBERT J. WHITAKER was appointed Assistant Professor of Physics at Southwest Missouri State University at Springfield, Mo. in the fall of 1974. He is working with the other faculty in revising and upgrading the physical science course for elementary teachers.

DOROTHY ANDREWS of Old Littleton Road in Harvard was nominated as Conservation Teacher of the Year by the New England Farm and Garden Association and the Massachusetts Audubon Society during the Society's annual meeting at the New England Aquarium last week. Mrs. Andrews is chairwoman of the Bromfield School Science Department. She was cited for the award because of her imaginative methods of developing ecological awareness in her students. She has used her photographic ability and travel experiences to explain the natural features and environmental problems in this country and abroad. Last Winter Mrs. Andrews served as a deputy leader of a wildlife conservation expedition for educators to East Africa.

DAVID R. STRONCK is currently the President of the Washington State University Chapter of Phi Delta Kappa and the President-Elect of the W.S.U. Chapter of Phi Kappa Phi. He was recently selected to be included in the 1974-75 edition of "Outstanding Educators of America." At the annual meeting of the Washington Science Teachers Association, he was presented the Award of Outstanding College Science Teacher of the State of Washington for 1974.

WILLIAM SWEETERS is Assistant Professor in Education at the University of South Dakota and is involved in a field-based, competency-based program for student teachers and would like to swap views and materials with others involved in such activity.

NATHAN S. WASHTON reports that his How to Teach Science in Elementary and Middle Schools (David McKay Co.) will be available in Spring '75 as a paperback. His paper on "Inter-Disciplinary Team Approach in Environmental Education" was published in The New Era, The official publication of the World Education Fellowship, January-February, 1975.

MILDRED TAMMINEN teaches General Chemistry and Chemistry of Life Processes primarily for student nurses. Her career interest is medical research. She reports that the JRST is excellent.

NEWS AND NOTES FROM THE MEMBERSHIP continued

ALLEN D. WEAVER reports for the fourth consecutive summer Northern Illinois University has received a grant from the National Science Foundation for an Implementation project in ISCS for junior high and middle school teachers of science in Illinois and adjoining states. The summer six-week session will be followed by four three-hour seminars to be held in the Fall. Bob Johnston of Denver, Colorado, will teach the course for the second summer. Weaver of Northern Illinois University will serve as the director. Currently-1974-75 Weaver is directing an Implementation project under NSF funding in SCIS and ESS for elementary school teachers in Northern Illinois and Northwestern Indiana. Seventy-five teachers received training last summer. Fifty-five continued with seminars twice a month in the Fall semester. They are aiding their science supervisors in training 235 additional teachers in their own school systems during the current Spring semester. Consultants are Mary Keegan of Winnetka, Dick Powers of Chicago, and Hal BunkeImann of Evanston.

PAUL F. PLOUTZ and MARY E. HAWKINS, co-directors of Educational Games, now have 10 games available for use in grades 3-10. Write to Educational Games, 19 Clearview Heights, Athens, Ohio for more information.

DONALD J. WAGNER of the Minnesota Environmental Science Foundation reports that he is presently involved in curriculum development and evaluation projects for environmental education in cooperation with Minnesota and National Education and Natural Resource agencies.

HELEN WEEKES of Wilmington, Ohio wrote that in her work at Wilmington College she has directed an Environmental Workshop for college students planning to teach in elementary schools. The workshop was held at Shawnee Environmental Resource Center.

ROY ALLISON, THOMAS ARNOLD, PAUL BELL, H. SEYMOUR FOWLER and STEPHEN LUCAS are cooperating in the Pennsylvania Science Teachers Association's Competency Based Teacher Education - Science Project which is funded by the Pennsylvania Department of Education.

WAYNE W. WELCH is completing his fourth year as Director of the Minnesota Research and Evaluation Project, an NSF sponsored project to study and evaluate various implementation programs. A bibliography of publications is available by writing Welch at 204 Burton Hall, University of Minnesota, Minneapolis 55455.

JUANITA WHATLEY is Research Associate in the Atlanta Public Schools and serves as an operations analyst for the Title IV-A Comprehensive Child Development Program in the Atlanta City schools. This operates in 37 centers and serves approximately 3700 children ages 6 weeks to 14 years old.

EMERY L. WILL, State University College, Oneonta, N.Y. has been developing and coordinating a college wide academic advisement operation during the past several years.

CHARLES A. WOODMAN is Director of Science for the Braintree Public Schools, Braintree, Mass. Total school population approximately 9000 students, high school population approximately 3000 students.

GEORGE ZAROOR sends the following: The Science and Mathematics Education Center of the American University of Beirut has a vacancy for a science educator will full command of Arabic. Enquiries should be addressed to Professor George Zarour, The Director, Beirut, Lebanon.

MORTON L. WOLFSON of John Jay College (CUNY) is presently teaching in a team of eight teachers around a theme titled, "The Urban Experience". He handles the scientific parts of the discussions and projects.

R.H. BARKER is involved with integrating Science and Mathematics in selected elementary schools of Kentucky and on the Advisory Council for Environmental Education for State of Kentucky.

BERYL S. CRAIG is involved in two projects. Development of Chemistry course for college-bound H.S. students, and development of General Science Course for non-college-bound high school students.

NEWS AND NOTES FROM THE MEMBERSHIP continued

PATRICK J. DOYLE currently has a grant proposal for an Environmental Education Program being considered by the Office of Education. He is a member of the Tennessee Visiting Scientists Program; and serves on the Steering committee of the Nashville Environmental Education Project. Doyle is one of 30 nominees for three outstanding teacher awards for the 1974-75 school year.

JERRY L. DUKES will be listed in the 1975 edition of Who's Who in the East in the Educator's Section. He is teaching Medical Technology at Washington Irving Evening High School, NYC, N.Y.

FREDERICK B. DUTTON has concluded his period of service as the first Dean of Lyman Briggs College, a residential College on the Michigan State University campus. He is now serving as a consultant in the Provost's office. He has served for a couple of months as acting Ombudsman and currently is acting director of the Honors College until a new permanent director is appointed.

ALBERT F. EISSL will be team teaching with CRAYTON JACKSON in Halifax, Nova Scotia next summer, with a group of about 50 elementary and secondary teachers and principals. They will be dealing with new curriculum developments, and ways of promoting change in Nova Scotia schools.

CHRISTOPHER J. DEDA of the University of Houston wrote: The campus here is rapidly expanding. We will double our faculty size next year and triple our present size by 1978. Many exciting things in science education are emerging: Programs in Science for Society, in Advanced Industrial Technologies; interdisciplinary courses offered both here and at local science-based institutions on science and human values.

RICHARD A. DILLING will be completing the Ph.D. at Purdue University in August of 1975 and then join the faculty of Grace College. His research is in the area of Lateral Specialization of the Hemispheres of the brain and how this is related to the ability to solve problems.

RAYMOND G. DISPOTO has completed a doctoral study of moral cognitive development (a la Kohlberg) in science education. Several related studies are in progress at the Rutgers University Graduate School of Education, Department of Science and Humanities, New Brunswick, N.J. 08903. He reports that they are the only science education group working in this area.

DALE G. MERKLE of Shippensburg State College, PA, reports that he was promoted to Full Professor in 1974 and received funding for a CBTE study in February, 1975.

ORARD EGIL DYRLI reports: as curriculum editor of Learning magazine (225,000 copies per issue, nine times each year), I wish to invite members interested in the Elementary School Curriculum to submit manuscripts for consideration. Guidelines are available from O.E. Dyrlil, U-33, The University of Connecticut, The School of Education, Storrs, CT 06268.

J.A. EASLEY is chairman of the Committee on Culture and Education, University of Illinois, Urbana-Champaign, an inter-disciplinary team of anthropologists, psychologists, and educators working on cultural and cognitive approaches to education that attempt to build curricula out of the resources the learners bring with them.

RAYMOND B. FAGAN sends the following report: Currently, I work for Woodward-Clyde consultants, as a senior environmental scientist (social sciences). The job entails evaluation of regional school systems programs and vocational training programs in applied sciences. I also help prepare environmental reports under NEPA on impact of Capital Construction projects upon human society (i.e. Effects of Science upon man and his culture.

LOUIS A. GATTA of Arlington Heights, Illinois is active in a project which deals with evaluation of a criterion referenced curriculum and its effect on achievement.

NEWS AND NOTES FROM THE MEMBERSHIP continued

WALTER A. FARMER is co-director of SUNY - Albany's competency based teacher education program for secondary school science and mathematics. This undergraduate program has been operational for two and one-half years and has graduated 100 plus teachers whose professional training has been on a CBTE basis. A theoretical model guides program development of this field centered approach and the assessment instrument has evolved as the result of participation by public school teachers, school administrators, university educators and students.

THOMAS P. FRASER wrote that his activities encompass: 1) Interim President, Morgan State College; since September 1, 1974, Second stint. First stint, 1970-71. 2) Developing Morgan State College into Morgan State University. Hopefully this will take place in the current session of the Maryland General Assembly.

RONALD N. GIESE is contributor to Natural World a Silver Burdette publication with copyright 1975; Assistant Professor at the College of William and Mary and will serve as a minicourse author at a ISIS Summer, 1975 Writing Conference.

ELVA R. GOUGH is currently a doctoral student in science education at Indiana University and a Science consultant for Corpus Christy Elementary School, Evansville, Indiana.

PAULINE GRATZ is Professor of Human Ecology at Duke University School of Nursing and will begin to teach a Seminar in College Teaching in a new graduate program which opened this January 1975. She received an Undergraduate Teaching Grant for use of the Physiotape as an audio-visual method of teaching Physiology laboratories and a Duke Regular Research Grant to investigate the nutritional habits of adolescent women between the ages of 17 and 20. She is looking forward to a sabbatical leave in Spring 1976 when she plans to complete a manuscript in Human Ecology.

H. CLARK HUBLER, Portsmouth, Ohio reports the publication of his book, Science For Children, which is concerned with teaching of science at the elementary and junior high school level. The book published by Random House is prepared to serve both as a college text and a resource book for students to use as they become teachers. An instructors manual is available.

HERMAN A. KRANZER, University of West Florida was elected to the Board of Directors of the Conservation Education Association and serves as a member of Florida's State Advisory Council for Environmental Education.

OAKLEY R. JENNINGS writes that his primary responsibilities are in the field of science for non-science majors and developing and improving physical science programs for Elementary Education majors and Elementary Teachers that are "on the job". Jennings would like to see more research or published literature about science for non-science majors.

LINDA A. JONES, Northridge, School of Education, California State University has developed and recently received approval for a new course, "Teaching Children to Measure." This summer she will be involved in an NSF institute for implementation of the ESS Program in a local school district.

JERROLD WILLIAM MABEN has been appointed coordinator of the Graduate Program in Elementary Education at Lehman College, The City University of New York; serves as co-director of a competency based environmental teacher education program conducted in cooperation with the New York Botanical Garden; and chaired Region II, New York, Puerto Rico, & Virgin Islands, of the NASA-NSTA Viking Student Project.

GEORGE F. MATTHIAS continues to develop student learning materials and revise the testing program for the Croton-Yorktown High school's Individualized Earth Science Program for the ninth grade students.

ANNIE A. MCDONALD received the Ph.D. in College Science Teaching from N.Y.U. on June 6, 1974, and has been serving as Assistant Professor of Elementary Education at Jersey City State College since September 1966.

NEWS AND NOTES FROM THE MEMBERSHIP continued

THOMAS G. LUCE of the Department of Biological Science, Purdue, is currently working on a CAI system for applications which do not require second by second interaction between student and computer.

RONALD MOGLIA of Temple University is presently doing a research project in the psychosexual development of preschool children and reports that he spent the summer in Sweden of Uppsala University studying World Health Problems and Human Sexuality.

MARLENE M. MILKERT was the coordinator for the Second International Conference on Metric Education held in Biloxi, Miss. January 27-29. A book containing the contributed papers presented at the conference is expected to be published in approximately six months.

BYRON E. MOORE is currently Consortium Coordinator and Director of Institutional Research for the Cooperating Winfield Colleges, Winfield, Kansas.

DONALD C. ORLICH, has assumed the Office of President of the Washington Science Teachers Association. He is a professor of Education at Washington State University, Pullman and has directed or co-directed nine NSF funded science education projects.

MARTIN D. STEWART was awarded the Ph.D. from New York University in October 1974 with a major in Science Education. He is now Associate Professor, Physics and Mathematics, Norwalk Community College, Connecticut.

J.V. O'CONNOR of Silver Springs Maryland sends the following extensive report: Currently directing the U.S.G.S. Darton Applied Geoscience Field Lab for Secondary Students located in Rock Creek Park in Washington D.C. as well as assistant chairperson of the Geoscience Department at the newest land-grant college - Washington Tech. Institute. The WTI population is 99% black urban students. This geology department is part of the total K-Adult Education project of awareness of applied geoscience in our urban environments. The College is currently seeking funds for an applied Earth Science Center for the Nation's Capital. The center objective is to foster education and research for the community. We will report on this as it develops.

PAUL A. REPICKY is currently completing a post-doctoral year in medical education at Baylor College of Medicine, Houston, Texas.

RAY M. SNIDER, Professor of Science Education at State University College, New Paltz, New York, has assumed responsibilities as editor of The Science Teacher's Bulletin, the official journal of the Science Teachers Association of New York State.

FRANK D. STEKEL of the University of Wisconsin, Whitewater writes that his duties are currently divided between teaching astronomy at UW-Whitewater and a SCIS implementation project in Racine, Wisconsin. NSF has funded a proposal to continue last summer's work with a "personalized system of instruction and Project Physics" next Fall.

KENNETH J. OSICKI sent the following note: Writing proposals and evaluating federal and state funded projects (Title I, Title III, Title IV, DPPF, etc.) for Cleveland Board of Education - Division of Research and Development. Did evaluation design and research for "Tracking Down the Sickle Cell" a mini-course in process of publication by Allyn & Bacon.

MILTON SCHULMAN is Full Professor of Biology at City University of New York.

DERYL SMITH is K-12 Science Coordinator and resource Teacher for the Harrison School District #2 in Colorado Springs, Colorado.

1. Paper Title: _____

2. Author's Name*: _____
 Last First Initial

*Give here the name of person who will make the presentation.

Affiliation: _____ Phone: _____

Mailing Address: _____

3. If a symposium or panel proposal, list other participants and institutional affiliations or in the case of a contributed paper, list additional authors.

_____	_____
_____	_____
_____	_____
_____	_____

4. Classification Number (for committee use - see Page 12) _____

5. Do you wish to have the use of an overhead projector? yes no
(Unfortunately we are limited to providing overhead projectors. If you need other types of equipment you will need to make your own arrangements.)

6. This paper should be considered for the following program category:
(See attached definitions of sessions.)

- | | |
|----------------------|--------------|
| a. Contributed Paper | c. Symposium |
| b. Paper Set | d. Panel |

7. In the case of a contributed paper, would you be willing to present it as a discussion paper if requested by the program committee? yes no
(If you would like the program committee to give special consideration to the possibility of using your paper as a discussion paper, it would be helpful if you would submit a copy of the entire paper along with this cover sheet and your summary.)

8. Are you a NARST member? yes no

I hereby certify that this paper has not been submitted for publication, and if this paper is accepted and placed on the program, I promise to appear and deliver it unless prevented by conditions beyond my control.

Signature

Date

Please return the following: This cover sheet as completed; 500-word summary (4 copies without author identification); two self-addressed, stamped envelopes.

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