

NARST NEWS

NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING

Thaddeus W. Fowler, Editor, University of Cincinnati, OH

Vol. 30 (2) June 1988

P R E S I D E N T

Patricia E. Blosser
The Ohio State University
Columbus, OH

1988 NARST 61st Annual Meeting

The 61st annual meeting of the National Association for Research in Science Teaching was successfully completed this past April. The program represented a wide variety of research interests. The networking sessions were well attended and I am hopeful that the conveners, or some other individual, will write up a brief announcement of each group's discussion to share with the NARST members who were unable to attend. One of my personal goals as NARST president is to increase the communication of NARST members so that cooperative, collaborative activities can take place between one annual meeting and the next.

Those NARST members present at the Awards luncheon heard Linda DeTure's presidential address in which she expressed her desire that the executive board meet this fall to consider NARST's mission and agenda for the future. It will be my task to implement such an action, if it is to take place. I would like to have input from the wider NARST membership to share with the executive board. So, if you have concerns or think you have identified some issues for NARST to study and consider for possible action, take time to put your thoughts on paper and write to me. (A telephone call is also acceptable, but writing provides more freedom to elaborate.) For example, some NARST members think an active effort should be made to recruit classroom teachers as NARST members. NARST by-laws speak to a NARST member's ability to conduct research. Over the years we have come to assume that the acquisition of a graduate degree implies the fulfillment of this criterion.

What are NARST members' thoughts on criteria for membership, and who should be recruited as a NARST member?

During Erle Thompson's presidency an ad hoc committee on international issues was formed. It has been functioning since that time, still in an ad hoc capacity. It is my understanding that ad hoc committees are established to meet a particular need and that they have a limited lifetime. Should NARST establish a standing committee to deal with international issues? If so, what should its specific charge be?

These are only two examples of items that might be considered for discussion when the NARST executive board meets this fall. They were chosen for some discussion here by random selection and not because some group considers them the most important items with which NARST should deal.

I would be most interested in hearing from NARST members about concerns they think the NARST board might consider. I would also be interested in hearing from those who think NARST is doing just fine as things now stand. Please write me at 1200 Chambers Road, Columbus, OH 43212 or call at (614) 292-6717, -6718. I need your input by mid October if I am to share your ideas with the board in advance of the meeting.

Before this column ends, I want to thank, once again, all of the NARST members whose efforts helped the 1988 annual meeting be the smooth running operation that it was: the Program Committee, the presidents, the discussants, and certainly the presenters, the local arrangements committee and the people they recruited to work at the registration desk, and the University of Cincinnati crew: Glenn Markle, Ted Fowler, and Toni Ann Markle.

Call for Proposals 1989 NARST Annual Meeting

William G. Holiday, Program Committee Chair

This is a call to NARST members and others to submit proposals for the program for the 1989 NARST Annual Meeting. The 1989 annual meeting will be held at the Holiday Inn-Union Square, San Francisco, March 30 through April 1, 1989.

continued

To promote a broad research base, the Program Committee encourages proposals that describe any of a variety of types of research. Please consider the following types of research: Experimental, Survey, Ex Post Facto, Evaluation, Historical, Philosophical, Case Study, Naturalistic, and other types. Standard guidelines appropriate for reporting each type of research are found in most research methods texts and should be followed in preparation of proposals and abstracts. In general the proposals should include *Objectives or Purpose of the Study, Design and Procedures, Findings or Results, and Conclusions*.

An individual may present only one paper, but may be listed as a co-author of another paper and may participate in a symposium or as a presenter or discussant. Presenters are strongly encouraged to stimulate discussion around their presentation. Overhead projectors and screens will be provided; participants needing to use other equipment are expected to provide their own. All presenters must register at the NARST meeting.

Persons wishing to submit proposals need to send:

1. Two copies of the completed cover page provided at the back of the newsletter.
2. Six copies of a three to six page proposal with bibliography. Please omit author name(s) and other identifying information from the proposal.
3. Six copies of an abstract of *no more than 500 words*, to be published in the collection of NARST abstracts, so form and accuracy are important. Please omit author name(s) and other identifying information.
4. Two self-addressed, stamped, envelopes, to be used to acknowledge receipt of proposals and the Program Committee's final decision.
5. Two 3 x 5 in. cards containing *typed* name, address, and telephone number of the author(s) and the title of the paper.

Send this material to:

William G. Holiday
Chair, NARST Program Committee
Science Teaching Center
The University of Maryland
College Park, Maryland 20742
301-454-7346

**DEADLINE: MATERIALS MUST BE POSTMARKED
NO LATER THAN OCTOBER 1, 1988**

All proposals will be reviewed anonymously by the members of the Program Committee. Standard criteria will be applied in the proposal review. The criteria are:

Significance of the problem and conclusions for the advancement of research in science education, as evidenced by the link to or departure from previously published research theories, methods, or conclusions.

Clarity of expression.

Appropriateness of the procedures and conclusions, given the stated purpose and results.

The following types of proposals have served as the basis of NARST Annual Meetings.

1. **Contributed Papers:** Brief 15-minute reports of research. These are grouped by the Program Committee to accommodate three or four per session. This format accommodates persons who have not planned to report their research with other members of a team. Discussants are usually assigned to these sessions. Presenters must provide discussants with a copy of the paper before the annual meeting.
2. **Paper Sets:** Several related studies originating from a common base of research are presented in a single concurrent session, accommodating from three to five persons who may divide a single report representing a major research effort in terms of time, number of researchers and/or geography. This format also allows for common elements of design or approach to be presented once rather than repetitiously. A discussant may be assigned to the session if one is not already identified in the proposal.
3. **Panels:** Panels are constituted to provide a mechanism for debating or discussing serious issues in science education. Each panel has a moderator, who may or may not organize the panel, but who is expected to regulate the flow of discussion or debate. Proposals should describe various aspects of the issue and the diverse views represented by the speakers.
4. **Symposia:** 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 papers together. Symposia should promote discussion of current or needed research. Following a brief presentation by each member of the symposium, interaction among presenters and the audience is expected. Proposals should describe the common research interests of symposia members, their varied backgrounds, positions or experience, without naming the individuals.
5. **Poster Sessions:** Poster sessions are designed to enable researchers to share information on research in progress. These sessions combine the graphic display of materials with an opportunity for individualized, informal discussions of the research. Authors are encouraged to bring copies of the full paper for distribution to interested participants.
6. **Round Table Discussions:** Round Table Discussions are used to provide a thorough analysis of a paper by a group. Presenters have an hour in which various aspects of the study are examined by 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 are expected to bring materials such as protocols, instruments, computer printout, experimental curriculum materials, and logs to aid in the discussion. This format is not conducive to presentations which require the use of audio-visual equipment.

7. **Research Methods Seminar/Workshop:** This format is designed to enable NARST members to acquire new research skills or update old ones. These one or two hour sessions are planned for intensive involvement by those in attendance, and presenters are expected to provide resources for study and discussion.

The Program Committee wishes to accommodate as many papers as possible and asks support from proposers if it is necessary to reassign some papers from one format to another.

Forum for Science Education to be held in Washington

Critical issues facing science teachers and teacher educators will be addressed at the fourth annual American Association for the Advancement of Science (AAAS) Forum for School Science. These include: professional enhancement of science teachers, the education of science teachers, the re-structuring of schools to support science teaching, the quality of science teaching, and the supply of qualified science teachers.

The AAAS Forum for School Science will be held on Friday and Saturday, October 7th and 8th at the Twin Bridges Marriott in Arlington, Virginia, just outside Washington, D.C. Everyone with an interest in science education is encouraged to participate.

Forum '88 brings together professionals from all over the country to examine crucial topics related to science education in grades K-12. Background papers to fuel the Forum discussions are being prepared by: Lisa Hudson of the RAND Corporation, Iris Weiss of Horizon Research, Inc., Roger Bybee of the Biological Sciences Curriculum Study and Michael Neuschatz of the American Institute of Physics and others. Presentations and formal discussions of background materials will examine how practitioners and policy makers can work together to improve the practice of school science.

For more information about the Forum please write: Forum for School Science, Office of Science and Technology Education, American Association for the Advancement of Science, 1333 H Street, N.W., Washington, D.C. 20005.

Rural and Small Schools Conference Proceedings — Now Available

The Science Education Section Rural and Small Schools Proceedings are now available for the years 1985, 1986, and 1987 (all in one volume). The conference is held each year at Kansas State University in conjunction with the Rural and Small School Conference. Topics covered in the proceedings include:

- Science Fairs in Rural and Small Schools;
- Understandings and Misunderstandings of Biological Concepts of Students Attending Small High Schools;
- Science Skills Objectives: An Approach for Allaying Science Anxieties in Teachers of Grades 4 - 6;
- Hungry for Information? Grab a Byte of This!;
- Adapting and Implementing a Laboratory-Based High School Science Program in a Small School;
- Developing Science Concept Understandings in Small Rural Junior high Schools;
- Science Activities for Elementary Grades Using Self-Contained Kits;
- Use of Field Sites to Enhance Earth Science Education in Rural and Small Schools;
- C.A.S.E. - Computer-Assisted Science Education;
- Using Community Resources to Effect a Successful Staff Development Program; and
- Teaching Science Through Science-Technology-Society.

This past year, over 150 science and mathematics educators from the mid-west and as far away as Connecticut, New York, Alabama, and Washington, participated in the conference. The conference will be held again next year on October 24 - 25, 1989. The attendance of Kansas teachers from rural and small schools is especially encouraged.

The Proceedings are available for \$6.00 by writing to the Center for Science Education, 244 Bluemont Hall, Kansas State University, Manhattan, KS 66506 or by calling Caron at 913/532-6294.

Constructivist Network Meeting

The constructivist network met at the recent NARST convention and tentatively decided to compile a list of teaching strategies that are consistent with the notion of constructivism. A number of group members were of the opinion that the currently popular model of instruction advocated by Madeline Hunter may in fact be counterproductive and in opposition to the constructivist approach. Therefore, it was decided to explore the Hunter approach more fully and attempt to prepare a position paper to be submitted to a journal such as *Educational Leadership* in which our findings comparing and contrasting the two approaches would be reported. If you are knowledgeable in either the constructivist model of teaching and/or the Hunter approach, we would welcome your assistance. Anyone who assists will automatically become a coauthor of the paper (listed alphabetically). Please send your contribution to Anton E. Lawson, Department of Zoology, Arizona State University, Tempe, Arizona 85287-1501 by September 30, 1988.

Problem Solving SIG Report

An excellent group of twelve people attended the first meeting of the special interest group. We shared our interests and made plans for the coming year. These plans include proposing one or more paper sets for NARST '89 and a symposium around the theme of "Trends and Issues in Current Problem-Solving Research."

If you would like to participate in either of these activities or if you would like to join the Problem-Solving SIG, please contact: Mike U. Smith, Box 145, Mercer University School of Medicine, Macon, Georgia 31207, (912) 744-4103.

NARST Awards Announced at 1988 Annual Meeting

Again this year NARST presented two awards for papers presented at the 1987 meeting. The Practical Applications Award was presented to Dr. Uri Zoller and Dr. David Ben-Chaim for their paper titled *Interaction Between Examination Type, Anxiety State and Academic Achievement in College Science: An Action Oriented Research*. The Outstanding Paper Award went to Dr. Kenneth Tobin and Dr. Barry Fraser for their paper titled *What Does It Mean To Be an Exemplary Science Teacher*. Congratulations are extended to the award winners.

Submissions Invited —

1988 NARST Outstanding Paper Award 1988 NARST Practical Application Award

Each year at the annual meeting of the Association the NARST Awards Committee identifies persons to be recognized by the organization whose papers, presented at the meeting of the preceding year, are judged to be outstanding in one of each of two areas:

Contributions to science education research and Practical applications of research to classroom practice.

The NARST Awards Committee invites all persons who presented papers at the 1988 meeting in St. Louis, MO to submit copies of the complete paper and abstract for consideration for the Outstanding Paper Award or for the Practical Application Award. These awards will be presented at the next NARST meeting in San Francisco.

The papers in each category will be judged on (1) significance of the problem investigated, (2) conceptual background, (3) research approach, (4) methodology, (5) significance of outcomes, (6) conclusions, (7) communication of information, and (8) overall uniqueness. Additionally, the papers submitted for the Practical Applications Award will be judged on (9) evidence of practical applications for practitioners.

Please send, **by September 15, 1988**, the eight (8) copies of your paper and abstract (a copy of the abstract needs to accompany each copy of the paper), a cover sheet of information including:

Name
Address with zip code
Telephone numbers
Request for review for the Outstanding Paper Award
or
Practical Application Award

and a self-addressed post card (which will be returned to you upon receipt of your materials) to:

Fred N. Finley
370 Peik Hall
159 Pillsbury Drive, S.E.
University of Minnesota
Minneapolis, MN 55455

NARST

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for
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Science
Teaching**

1988-1989

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Committee Charge

The Financial Advisory Committee is responsible for considering the annual budget prepared by the Executive Secretary, approve program expenses, approve publication costs and new ventures, offer advice and recommendations to the Executive Board regarding all financial affairs of the Association, and conduct an annual audit of the financial accounts of the Association.

The members include a chairman (three year term) three members (with rotating terms) and the Executive Secretary (ex officio).

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Committee Charge

The Publication Advisory Committee is responsible for establishing policy concerning the newsletter, the journal, and special publication ventures of the Association; reviewing arrangements with editors of publications; and suggesting changes in yearly publication practices of the Executive Board.

The members include a chairman (three year term), three members (with rotating terms), and the Editor, (ex officio).

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Committee Charge

The Policy Advisory Committee is responsible for annually reviewing the Bylaws, changes in structure or orientation of the Association, and reviewing new activities or ventures of the association.

Election Committee

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409 N. Mercedes Drive
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Committee Charge

The Nominating Committee is responsible for establishing the slate of officers for each election four months prior to the date of the Annual Meeting, making arrangements for preparation and distribution of ballots three months prior to the date of the Annual Meeting, tabulating election results, notifying candidates of the outcome of the election a month prior to their assuming office, announcing election results at the Annual Meeting, and arranging for installation of new officers and transfer of responsibilities of the Executive Board for the Association.

The members of this committee shall consist of the immediate Past President as chairman and two members with one year terms.

Research Committee

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Committee Charge

The Research Committee is responsible for preparing yearly reviews of research in science education, working closely with the ERIC Center and recommending needed areas of research, research symposia, and training programs.

The membership of this committee consists of the chairmen and three members with two year rotating terms. The Executive Secretary is an ex officio member of the committee.

Distinguished Contribution Award Committee

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Committee Charge

The Awards Steering Committee is responsible for recommending policy for establishment of awards for the Association including the nature of the awards and the award's selection process.

The membership of this committee consists of the chairman and six members on three-year rotating terms. Additional sub-committee members may be appointed on a two year basis as needed for the review and selection process. The Executive Secretary is an ex officio member of the committee.

Ad Hoc Committee on International Issues

Chairman

Pamela Fraser-Abder (1989)
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Committee Charge

The Program Committee is responsible for establishing the theme and format for the Annual Meeting, arranging for special speakers and symposia, and evaluating abstracts for contributed papers, and the evaluation of the Annual Meeting. Additionally, a Local Arrangements Committee may be established.

The membership of this committee consists of the President-Elect as chairman, six members on two year rotating terms and as ex-officio members, the Research Coordinator and the Executive Secretary.

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NARST CALENDAR

| | |
|------------------------------------|------------------------|
| NARST News | June 1, 1988 |
| First Call for Proposals for 1989 | June 1, 1988 |
| NARST Annual Meeting | |
| NARST News Submission Deadline | August 1, 1988 |
| NARST News | September 1, 1988 |
| Second Call for Proposals for 1989 | September 1, 1988 |
| NARST Annual Meeting | |
| Deadline: Submission for | September 15, 1988 |
| Outstanding Paper and Practical | |
| Application Paper Awards | |
| Deadline: Proposals for 1989 | October 1, 1988 |
| NARST Annual Meeting | |
| Fall Board Meeting (Little Rock) | November 4, 5, 1988 |
| NARST News Submission Deadline | November 1, 1988 |
| NARST News | December 1, 1988 |
| Payment of 1989 Dues | January 1, 1989 |
| Deadline: Nominations for | January 15, 1989 |
| Distinguished Contributions to | |
| Science Education Research | |
| Award | |
| Elections Ballots Distributed | January 7, 1989 |
| Return of Ballots | February 7, 1989 |
| NARST News Submission Deadline | February 1, 1989 |
| NARST News | March 1, 1989 |
| Deadline: Pre-Registration for | March 15, 1989 |
| NARST Annual Meeting | |
| AERA Annual Meeting | March 27-31, 1989 |
| (San Francisco) | |
| NSTA Convention (Seattle) | April 6-9, 1989 |
| NARST Annual Meeting | March 30-April 1, 1989 |
| (San Francisco) | |
| NARST News Submission Deadline | May 1, 1989 |

Segundo Encuentro Regional de Investigadores en la Enseñanza de las Ciencias y de la Matemática:

The 2nd Consultation of the International Consortium for Research in Science and Mathematics Education including representatives from Canada, the Caribbean, Central America, England, and the United States was held at the Hotel Sheraton Herradura in Heredia, Costa Rica from December 9-11, 1987. The consultation was sponsored by IIMEC of the University of Costa Rica, CONICIT, The Ohio State University, and the University of West Indies of the Republic of Trinidad & Tobago. The chief organizers and hosts for the Second Consultation were Professor Hugo Mora and Dr. Juan Esquivel of the University of Costa Rica in San Jose.

The program included contributors and participants from Canada, Costa Rica, England, Jamaica, Panama, Trinidad & Tobago, and the United States. The program included 43 paper presentations, workshops, symposia, and invited speakers involving over 64 individuals.

The United States scholars included John Koran from the University of Florida, Dave Butts and Jim Okey from the University of Georgia, Jim Gallagher from Michigan State University, Donna Berlin from The Ohio State University-Newark, and Art White from The Ohio State University, Jim McCroskery from SUNY at Oswego in New York, Linda DeTure from Rollins College in Florida, and Jim Barufaldi from the University of Texas-Austin.

In addition to the academic program, the 2nd Consultation included receptions, group dinners, musical performances, dancing, entertainment, informal outings (searching for obscure restaurants), and opportunities to tour the beautiful countryside of Costa Rica. All who attended the meeting unanimously extend their congratulations and appreciation to our Costa Rican friends and colleagues for a very rewarding Regional Consultation. To Hugo Mora, Zayva Mendez, and the IIMEC staff, we congratulate you on a job well done. The events were well organized, the program was exciting and stimulating, and the hospitality was warm and memorable. It was particularly rewarding to hear reports of collaborative research and development work underway involving Central American, Caribbean, and North American individuals. Of particular importance are projects where people, institutions, and countries are working together and sharing their perspectives and expertise. We can all be proud of the progress the Consortium has made possible. It is hoped that these efforts will continue to benefit our countries in the future.

The topics for presentations and discussions for the 2nd Consultation were varied in nature and covered a

broad range of interests and concerns. The topics included: teacher-pupil interactions, implementation of change, informal education, problem solving, science process skills, science achievement, wait time and questioning strategies, microcomputer-based laboratories, action research, integration of science and mathematics teaching and learning, spatial-symbolic information processing skills, philosophy and mathematics education, chemistry education, calculators in the elementary school mathematics curriculum, error analysis, research agenda for science/mathematics education, science attitudes, gender roles, street science, teaching reading and writing in science class, scientific literacy, and qualitative research methods. Many of these topics occurred more than once in the program and were common to many countries.

The participants of the 2nd Consultation offered the following comments and recommendations for the future activities of the International Consortium for Research in Science and Mathematics Education. (1) The Consultations have made possible the sharing of the most recent developments and trends in science and mathematics education. (2) The Consultations have revealed the fact that the majority of the educational problems which people face are common throughout the world. (3) The Consortium needs to develop ways to facilitate the oral translation at the Consultations as well as the written translation of research reports. (4) A common glossary of basic terms should be developed and maintained to facilitate cross-cultural communication. (5) Latin American countries in addition to Costa Rica and Panama should be encouraged to participate in the Consortium. (6) The Consortium should develop a communication network to keep researchers informed. The Newsletter communication should be more frequent and include a broader distribution. (7) Research reports should be made available in both English and Spanish whenever possible. Abstracts should always be in both languages. (8) Since the Consortium Consultations are planned for every two years, the regions should hold meetings on the off years. (9) The Consortium should promote replication of studies in the different countries, encourage interdisciplinary studies, and involve public school personnel on the research teams. (10) The Consortium should promote professional development and inservice activities for the participants with a focus on research skills and the infusion of research findings into classroom practice.

3rd Consultation Slated for Venezuela:

The International Consortium for Research in Science and Mathematics Education has been scheduled for Venezuela. Armando Contreras has agreed to organize the meeting to be held either in September, 1989 or

continued

February, 1990. Armando suggests that the Universidad de los Andes in Merida would be good spot. The current hotel prices in Merida, Venezuela are at \$18 US/night. These prices undoubtedly will change before then but are indicative of what we might expect.

Proposals for the program should include a 500 word abstract in **both** English and Spanish, and a summary of 6 pages or less in the language of your choice. The call for proposals will come out during Autumn of 1988 and the proposals will be due in April, 1989. Proposals can be carried to the 1989 NARST meeting in San Francisco or mailed to:

Armando Contreras
Apartado Postal No. 143
Trujillo-EDO Trujillo, Venezuela
Telephone: (72)-71365 (Home)
or
Art White
Educational studies, Arps hall 252
The Ohio State University
Columbus, OH 43210 USA
Telephone: (614) 890-2453 (Home)
(614) 292-8061 (Office)

Three Publications Available from Australia

Exemplary Practice in Science and Mathematics Education

Edited by Kenneth G. Tobin and Barry J. Fraser

This book reports 13 researchers' case studies of 20 teachers nominated by their peers as exemplary science or mathematics teachers at the Grade 1 to 12 levels. Case studies were based on observations of teaching, interviews with teachers and students, student perceptions of classroom environment and, in some instances, a comparison of exemplary and non-exemplary teachers in the same schools. The study highlights the importance of teachers' knowledge of content and teaching, classroom management, monitoring of student understanding and using concrete aids to promote meaningful learning. Overall the book contributes to the improvement of science and mathematics teaching through its provision of case studies of successful teachers and its identification of key practices common to exemplary teachers in different schools. To order this book, send \$13 made payable to "Florida State University" to Dr. Ken Tobin, Science Education, Florida State University, Tallahassee, FL 32306.

The Processes of Curriculum Development and Evaluation: A Retrospective Account of the Processes of the Australian Science Education Project

By David Cohen and Barry J. Fraser

This book provides a retrospective account of the processes of curriculum development and evaluation used by the Australian Science Education Project, a venture which pioneered large-scale State-Commonwealth cooperation in education in Australia. The processes are described to identify practices to guide future curriculum initiatives, whether project-based or school-based. Important implications are drawn for policy-makers and those interested in curriculum at the classroom, school, system and national levels. To order this book, send \$15 in Australian currency or the equivalent in any other currency made payable to "Curtin University" to the Science and Mathematics Education Centre, Curtin University of Technology, GPO Box U1987, Perth, Western Australia 6001.

Gender Issues in Science Education

Edited by Barry J. Fraser and Geoff Giddings

This monograph contains chapters written by Jane Butler Kahle (Purdue University), Ken Tobin (now of Florida State University and previously of Curtin University), Lesley Parker (Secondary Education Authority of Western Australia) and others. To order this publication, send \$10 in Australian currency or the equivalent in other currency made payable to "Research Seminar and Workshop Series" to Faculty Secretary, Faculty of Education, Curtin University of Technology, GPO Box U1987, Perth, Western Australia 6001.

COVER SHEET FOR NARST PROPOSAL
1989 ANNUAL NARST MEETING, HOLIDAY INN—UNION SQUARE, SAN FRANCISCO, CA

(Please type the requested information)

1. Title _____

2. First author presenting paper

Name _____ Phone () _____

Institution _____

Address _____

Zip _____

3. Name and Institutional Address of Co-Author(s) and, if appropriate, Sub-titles (please include zip code for all co-author(s))

4. Signature _____ Date _____

5. Type of activity proposed (check appropriate entry)

- Contributed Paper Paper Set Panel Symposium Poster Session
 Round Table Research Methods Workshop/Seminar

6. Special Instructions or Comments:

7. Descriptors that would identify the topic of the proposal:

8. Are you a member of NARST? _____ Yes _____ No

9. Please include the following materials with your proposal
(Omit author name(s) and identifying information in abstracts)

- Two completed cover sheets
- Six copies of a 500-word abstract (to be published)
- Three to six page proposal with bibliography (6 copies)
- Two self-addressed, stamped envelopes
- Two 3 x 5 index cards containing name, address and telephone number of author and paper title

PROPOSALS MUST BE POSTMARKED NO LATER THAN October 1, 1988

NARST News

NARST News is published and mailed to members on the first of the month of March, June, September, and December. Contributions need to be received one month before the publication date. Send contributions to the editor:

Dr. Thaddeus W. Fowler, Editor
NARST News
College of Education
University of Cincinnati
Cincinnati, OH 45221-0002

The newsletter is a way for NARST committees to communicate with the membership. Special interest groups can announce their plans, projects and contact persons. Members can announce items of interest. First priority will be given to regular *NARST News* features and other articles will be published as space permits. Please submit copy in printed form and, if possible, also as a text file on a "five inch" floppy MS-DOS computer disc (WordPerfect preferred).

Attitude Networking Group Report

The central purpose for the meeting was to discuss theoretical rationales that might be used by science educators to generate research on changing the attitudes of teachers and students toward science and science-related topics. With this purpose stated the interests of the group led us briefly into several topics (e.g., attitude measurement), but much of the session was spent on Ajzen and Fishbein's theory (Ajzen, I. & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs: NJ. Prentice-Hall.) of reasoned action. Here attitude is solely evaluative and in two parts: 1) attitude toward performing a behavior (e.g., teaching of science), not toward a broad attitude object (e.g., science), and 2) the subjective norm, the influence of significant others on our attitudes. The source of attitudes is within our beliefs which lead to attitudes and attitudes to behavioral intention — the precursor to behavior.

Members of the group discussed a networking plan whereby we would keep in touch with each other. The *ARISE* attitude newsletter published periodically by Tom Koballa at the University of Texas may serve as the medium for our exchange of information.

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