

October 15, 1987

Vol 1 #2

TO: Members of the International Study Group on Probability and Statistics  
Concepts and Intuition

FROM: Joan Garfield, University of Minnesota

Yes, the Study Group still exists, but there has been a change in leadership. I have recently taken over the position of Secretary from David Green, who has become the editor of Teaching Statistics. My first task is to update the list of members and addresses. Please complete the attached form and distribute copies of it to any interested colleagues.

My second task is to look at and update the original description and aims of this study group, also enclosed. Please send in your reactions and suggested additions or modifications. Of the committee positions proposed only one is filled: that of secretary. Please comment on whether we need to maintain the other positions. If you believe they are needed, I would appreciate nominations of yourself or others for the positions of President (or chairman) and 3 committee members.

Given the growing movement around the world to introduce more probability and statistics at the precollege level, there is an increasing need for educators to be informed about how students learn these concepts and which methods and materials are most effective in helping students learn. There is a large (and open) research agenda waiting for committed investigators. I believe that this type of research is most productive when it is done in collaboration, with different researchers providing their varied expertise and perspectives.

This study group can serve an important role in stimulating, guiding, and facilitating the needed research by continuing with its original aims. It can provide a mechanism for connecting individuals with others with similar interests in order to correspond, share materials, read drafts of papers, critique and share testing instruments, etc. Putting together this network of people involves establishing two databases: one of member information: their locations and research interests, and a second database to consist of a current online bibliography of relevant papers, indexed by keywords. Eventually, members would be able to request selected bibliographies to use in their research projects.

If members are willing to send me current lists of their relevant publications, I can begin preparation of a computerized master bibliography and distribute it to members.

Thank you for your cooperation.

JG/ps

Enclosures

International Study Group on Probability and Statistics Concepts and Intuitions

The Aims of the Group:

- AIM 1 Promotion of the exchange of information between members
- AIM 2 Encouragement of research activity by members
- AIM 3 Development of probability and statistics concepts testing instruments
- AIM 4 Improvement in the teaching of probability and statistics by dissemination and interpretation of research findings to educators
- AIM 5 Organization of meetings

Some Means to Promote the Aims

Promotion of AIM 1:

The following lists to be established and kept up-to-date and circulated

- (a) Members names and addresses and interests
- (b) Journals which publish relevant papers
- (c) Relevant published papers
- (d) Dissertations and theses in the field
- (e) Privately circulating unpublished papers

The assembly at one place of a collection of known papers in the field. For those not in English, the preparation of a translation or a summary in English. Members would be able to request photocopies of papers (especially translations) not otherwise attainable.

Promotion of AIM 2:

The encouragement of both psychological and research activity can be served by the exchange of information above-mentioned, and by arranging meetings and possibly publishing short reports on ongoing research of the members. The need for improving research methodology and encouraging long-term research projects can be met by these means.

Promotion of AIM 3:

By co-operative effort those test items already developed in one country can be widely tested, ultimately providing internationally accepted measures for probability and statistics concepts and intuitions. Further debate on the nature and description of these concepts and intuitions will be required.

Promotion of AIM 4:

The need exists for both psychological and didactic research to both influence and reflect classroom practice. It is necessary to bring together the educator and the researcher. The educator needs to be made aware of the concepts and intuitions involved and their structure. The researcher needs to relate his work to the philosophy of the educator, in both content and process aspects.

Promotion of AIM 5:

Meetings should be arranged. These should coincide with the ICME and ICOTS meetings when held. Other meetings might also be arranged.

General

A committee will be required, and in particular a secretary to circulate the membership, and organize the compendium of papers.

The committee might consist of

- (a) President or chairman
- (b) Secretary/Treasurer
- (c) 3 members

My Current Plans as Secretary

Specifically, I see the future activities of the study group categorized according to the original aims:

1. Promotion of the exchange of information between members.

I plan to edit and distribute a newsletter, beginning in January, 1988, containing information on current research projects (as I am informed by members), new publications, grants, and newly developed (and evaluated) curriculum materials. The newsletter will also be a place for members to request information from the group or to explore opportunities for collaboration on projects. The computerized databases of members and references will also facilitate information exchange.

2. Encouragement of research activity by members.

Through access of the member database I hope to connect people with similar research interests so that they may correspond about ideas and/or meet at conferences. Members would be encouraged to circulate preprints of articles for feedback. I will also try to facilitate research activity by providing bibliographies on selected topics to interested members.

3. Development of probability and statistics concepts instruments.

There is a tremendous need for valid and reliable instruments to use in measuring student understanding of probability and statistics concepts. Such instruments will be extremely useful in research studies where measures of student learning are required. A major testing company in the U.S. is currently developing probability and statistics items to use on college aptitude tests. We need to develop our own instruments and to share, revise, and adapt them so that instrument development need not be a major effort in each research study. The first step is to locate (through queries in the newsletter) existing instruments and to circulate this information.

4. Improvement in the teaching of probability and statistics by dissemination and interpretation of research findings to educators.

An attempt will be made to include in the newsletter notices of recent articles in a variety of journals which report on research relating to teaching probability and statistics. Members will be invited to submit short summaries of these articles and to comment on their practical value to educators to include in the newsletter. Perhaps a monograph can eventually be prepared by a committee which summarizes several of these studies.

5. Organization of meetings.

On the enclosed form I have asked people to indicate if they plan to attend ICME and ICOTS. I will establish and circulate lists of members attending international conferences so that groups may meet to discuss all of the above items.

I wish to remain or become a member of this Study Group:

NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

COUNTRY: \_\_\_\_\_

My research interests: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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NOMINATIONS FOR CHAIRMAN: \_\_\_\_\_ Should we fill these positions?  
\_\_\_\_\_ yes  
COMMITTEE MEMBERS: \_\_\_\_\_ \_\_\_\_\_ no

I plan to attend ICME in Budapest, 1988      yes \_\_\_\_\_ unsure \_\_\_\_\_ no \_\_\_\_\_

I plan to attend ICOTS in New Zealand, 1990      yes \_\_\_\_\_ unsure \_\_\_\_\_ no \_\_\_\_\_

Comment on my current plans for the study group:

Please return this, along with a current list of your relevant published or unpublished papers, to:

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U.S.A.