Initiating a Technical Editing Program for R and D Operations*

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Experience in initiating a technical editing program for research reports is reviewed and the various problems arising are discussed.

About two years ago our Chemicals Division research management became convinced that technical reports of laboratory investigations required considerable emendation. Although attempts had been made, via directives, to achieve some degree of consistency of format and philosophy of presentation, there still existed much room for improvement.

The position of Coordinator of Technical Editing and Communications was created in February, 1965 for the express purpose of improving the quality and speed of technical reporting. In addition, the over-all aim of keeping all technical personnel promptly informed of internal technical developments was incorporated into the functions of the job. These and other additional functions are not covered in this paper.

To help fulfill the editing function, a Standard Practice was prepared, detailing format, content of each report section, and a work-flow diagram. After discussion with and approval by management, copies of this procedure were distributed to all technical personnel in research. Shortly thereafter, the editor met with the various research managers and their respective staffs to explain details of the new procedure and to resolve any misunderstandings.

HOW IT WORKS

When a report is scheduled, the author starts by preparing an outline to serve as the basis of a first draft. He then proceeds to "put the meat on the bones." In this connection, use of dictating equipment is strongly encouraged as a means of saving time. A package consisting of a double-spaced typed draft, plus all tables of data, graphs, illustrations, etc., is then submitted to the technical editor. The draft is edited for readability, logic, and correct English usage, including chemical nomenclature. It is also checked for logical organization and conformity to the approved format. Tables of data are recommended, wherever applicable, as a means of presenting facts clearly and quickly. Polaroid photographs of equipment are also favored over line drawings because of ease and speed of preparation as well as reduction of the amount of written description necessary. The edited draft is then reviewed with the author and signed by the editor.

Following the conference with the editor, the author modifies the draft if necessary, and then submits it to his supervisor for approval, particularly of technical content. The master copy of the report is then typed and proofread by the author, and the required signatures are secured. Following printing for distribution, the author checks the individual copies for appearance and correct collation before delivering to the technical director, who affixes a covering letter with his comments and then distributes the report.

UPGRADING OF TECHNICAL WRITING

An author card file is maintained by the technical editor for recording individual writing problems and brief commentaries on the drafts submitted. This confidential file is used exclusively by the editor to follow the progress of each author from report to report and as an aid in diagnosing and correcting any writing difficulties.

As an additional means of evaluating writing quality, as well as effectiveness of the editorial function, another device is used. A supply of small mimeographed rating sheets was distributed to the technical directors requesting comments, returnable to the editor for his author card file. These simple forms make it possible for the directors to quickly register opinions on the individual sections of the report with ample room for generalized comments, suggestions, or complaints. Percentage response has been very good (about 60%), showing a healthy interest and willingness to assist in our program.

Besides the routine personal conferences with authors submitting report drafts, other teaching means are also used. A series of symposia was held, attendance voluntary, at intervals of 2 to 3 weeks, in which the various sections of technical reports were discussed in detail, with particular attention to outlining, use of graphs, illustrations, and tabulation of data. Freewheeling discussion periods following these presentations have indicated sincere interest of the participants in upgrading the quality of their writing. This series will be repeated, probably at yearly intervals.

A file of writing and reporting aids, in the form of papers, reprints and books, is maintained by the editor in his office and is available to all.

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Eight portable dictating machines were purchased as part of the program. Instruction and practice courses in dictating were given to several groups by the manufacturer's representative. These machines are in constant use on a loan basis, serving their intended purpose—the speeding up of communications. Not all drafts are dictated as yet, possibly because there may not be enough dictating units available and possibly because some people may find it difficult to dicatate.

OTHER RELATED FUNCTIONS

Although the primary function of the technical editor is in the area of report writing, other related areas are also encompassed. The preparation of papers for publication often entails several round trips of the manuscript to a journal editor before it is accepted for publication. By providing editorial assistance to the authors, we have eased the rewrite burden considerably. Too frequently, papers have been sent to the journals without attention to the format required. Copies of the requirements for submission of papers, as printed in a number of representative journals, are now on file in the editor's office for use and study by prospective authors. A Standard Practice has also been written to cover the regulations for clearance of papers, publications, and presentations by management before submission to journals. Besides this service, assistance is given in the preparation of slides and charts for oral presentation of papers.

The improvement of letter and memorandum writing is another target. Initial steps have involved the occasional issue of a single-page flyer giving comments on common writing faults encountered by the editor, information on new writing and communications aids, and other items of related interest.

GENERAL OBSERVATIONS

At the initiation of the editing program, several misconceptions and apprehensions had to be dispelled.

The technical editor serves in an advisory capacity and therefore must achieve results by advice and persuasion rather than fiat. However, complete and enthusiastic support of the program by management has strengthened and lent weight to the editorial function.

The technical editor is not a "ghost" writer of reports. Under no circumstance does he serve as a writer who takes a collection of laboratory results and then produces a report. A very distinct effort has been and continues to be made to make the individual authors feel that reports are their own product, and that editing is primarily for helping them produce more readable and valuable reports. The researcher is the acknowledged expert on the report contents; what we do is try to help him present his case in a factual, lucid, and convincing manner with a minimum of modifications of his style. Care is taken to ensure that all conclusions stated are based on facts given in the report.

Recommended alterations, ranging from correction of verb tenses all the way to conversion of two single-spaced pages of typing to a three-sentence abstract, are usually accepted with good humor and reflected in better quality with each succeeding report. Knowledge of the existence of the "progress file" serves as a psychological stimulus to many. Careful and tactful review and discussion of the first report submitted by an author invariably pays dividends in attitude and skill.

It was anticipated that authors whose native tongue was other than English would have additional problems. Fine shades of meaning suffer badly in translation. Here, an introduction of *Roget's Thesaurus* and demonstration of its use has proven most valuable—the editor's copy is in constant demand and one chemist reported he bought two, one for the laboratory and the other for his home!

An editor's success in performing his function is enhanced by the respect he has earned as an experienced chemist himself and by his familiarity with the problems the laboratory man faces in his work. His tact and sense of humor help immeasurably in dealing with many different personalities.

The voluminous literature on technical writing makes it difficult for an initiate to choose source material. The following books are suggested as a nucleus:

E. Ehrlich and D. Murphy, "The Art of Technical Writing," Crowell, New York, 1964.

M. S. Peterson, "Scientific Thinking and Scientific Writing," Reinhold, New York, 1961.

W. H. Waldo, "Better Report Writing," Reinhold, New York, 1957.

B. H. Weil, "The Technical Report," Reinhold, New York, 1954.

B. H. Weil, "Technical Editing," Reinhold, New York, 1958.

Correction

A Novel Organizational Code for Organic Structures Based on Functional Groups

In this article by James F. Feeman [J. CHEM. DOC. 6, 184 (1966)], there is an error in Table I on page 184. The line labeled "7" should read "bicyclic rings(s) other than naphthalene or bicyclic ring(s) with monocyclic rings(s) in structure."