Qualitative Research: Boot Camp for Editors

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During the Philadelphia CBE meeting, a friend lamented the lack of knowledge about "best practices" in the editing profession, knowledge based on thorough research about such factors as the order of editorial tasks and the physical environment. We all develop personal systems, and some of these have been codified and published, but is there any research to back up the recommendations? Valerie Florance, in her "boot camp for editors" introduced the concepts and methods of qualitative research, which just might be appropriate for this type of inquiry. Through her experience in both anthropology and information sciences, Florance has developed a well-organized approach to this complex topic.

In the 2-session presentation, editors accustomed to dealing with the IMRAD system learned that many of its principles simply do not apply in qualitative research. There is no null hypothesis; the study design is emergent, developing as the study proceeds; and the researcher is overtly acknowledged as a component of the study. Furthermore, the researcher takes a holistic approach to the situation under study, rather than trying to isolate a single factor. Thus, prediction and control are impossible; instead, comprehensive understanding (of a culture or of learning methods, for example) is the goal.

As its name implies, qualitative research does not rely on quantitative analytic techniques, such as statistical procedures. Instead, enormous data sets are reduced by coding methods, and the researcher looks for patterns while preparing a descriptive report. The report is then discussed with the participants (qualitative research typically involves human subjects) to ensure that the analysis makes sense to them, even if they don't agree with the conclusions (what Florance calls the "Aha! test").

Qualitative research can take the form of case studies, surveys (for example, using guided interviews or questionnaires), historical-document analyses, standardized observational research (for which coding, the assignment of descriptive labels, might be needed), ethnography, and so on. The data might consist of words, images, sounds or records of behavior, or some combination of these.

Such studies yield "tons of data"—for example, hours of taped interviews. The researcher must then annotate the field notes gathered during the sessions with participants, look for and code the concepts in the

McCoy, like Potler and Cameron, emphasized the importance of hiring the right person for the job, saying, "Hold out for the best candidate you can find." She recommended preventive hiring, which she defined as hiring the overqualified if they have skills that you might use later. With current staff, she suggested identifying those who are not afraid of change and reassuring those who are.

Today's brave new world of publishing is not as dire as the world that Huxley created, but it is fraught with contemporary problems regarding staffing. Short of breeding, cloning, and conditioning, how do we hire and retain the right employee? According to Potler, Cameron, and McCoy, the savvy manager hires smart, trains thoroughly, and rewards often. And as McCoy said, "Be one step ahead of the game, even when you don't know what the game is."
field notes, and organize the information. He or she would then go on to develop alternative views of the data. Scientific editors will recognize the steps of looking for contrary evidence, having peers check your methods and interpretation, and creating an "audit trail" so that someone else can follow in your footsteps; these also apply in qualitative research.

The final report should be comprehensive, should present sufficient compelling evidence for the researcher's interpretation, and should consider other perspectives. The context of the study should be conveyed through "thick description", so that the reader can judge how well the situation and its protagonists compare with those elsewhere.

Florance illustrated her discussion with some of her own research: an observational study of hands-on instruction in library information management and an attempt to design a clinical extract for patient-centered problem-solving (for a description of this study, see CBE Views 1996:19(2):20). Participants in the CBE sessions got a feel for the complexities of and possible variation in the data analysis when they were asked to code data from the observational study, categorizing the comments and questions of students in the hands-on course. Another core technique for qualitative analysis is constant comparison, whereby the researcher develops definitions of data categories from the features of similar events.

Important aspects of qualitative research that also apply to the quantitative form include the examination of internal and external validity (the study's credibility and transferability, respectively), reliability, dependability, and confirmability.

In addition to guiding the hands-on exercises in her sessions, Florance supplied a short bibliography on qualitative research and selected readings from the main sources. We editors might only rarely call on knowledge of qualitative research methods as we go about our daily work, but Valerie Florance's boot camp has opened a window on how we might discover more about our own profession.

Research Integrity and Scientific Misconduct: Responses and Critical Issues

Moderator:
Annette Flanigan
Journal of the American Medical Association
Chicago, Illinois

Speakers:
Mary Scheetz
US Office of Research Integrity
Bethesda, Maryland

Mark Frankel
Professional Ethics Report
American Association for the Advancement of Science
Washington, DC

Reporter:
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The questions of how to define research misconduct and how to protect whistleblowers and accused researchers are important and controversial in science. Mary Scheetz described the definition and guidelines proposed by the US Department of Health and Human Services Commission on Scientific Integrity, and Mark Frankel described how various scientific communities—researchers, trainees, administrators, journal editors, the news media, and government agencies—have responded to the report and related efforts. The panelists also discussed the potential effects of electronic publishing on the opportunities for misconduct and the likelihood of detecting it.

Scheetz explained that the most recent proposed definition attempted to respond to criticisms and discussions throughout the scientific community. In general, the definition covers research misconduct (misappropriation, interference, and misrepresentation) and professional misconduct (obstruction of an investigation of research misconduct and noncompliance with research regulations). Scientists (investigators) have applauded the new definition because it addresses difficult issues that lie outside the traditional designations of fraud, fabrication, and plagiarism. They are also, however, worried that the proposed definition will stifle scientific inquiry.

Mark Frankel began his presentation by saying that in the middle to late 1980s the scientific research community did not appear to be taking misconduct issues seriously. Scientists seemed to feel that any problems were minor and should be left to the research community to handle. A series of scandals involving prestigious academic institutions, however, put the issue of misconduct on the front pages of national newspapers, and the community had to acknowledge the problem. He thinks that the scientists' objections and comments, although they might appear diffuse on the surface, all deal with an important core concern: who controls science and the conduct of science. Scientists are afraid that the government is gaining control, and they consider that dangerous for the future of science.

The panelists then discussed the guidelines proposed by the Office of Research Integrity (ORI) for the protection of whistleblowers. The government is concerned that institutions will retaliate against those who bring charges of misconduct. (ORI has resolved 19 retaliation cases since 1992 and