A Proposal for Diverse Research Methods and a Common Research Language

The field of occupational therapy is developing a wide-based research commitment as a result of the profession's desire to validate, through empirical investigation, the therapeutic effectiveness of its practice (Ottenbacher & Short, 1982, p. 80).

One decade ago, Short-DeGraff and her colleague, Ottenbacher, analyzed the methodological trends in occupational therapy research (Ottenbacher & Short, 1982). At that time, the ultimate goal was increased use of quantitative methods thought to be best suited for the highly needed efficacy studies in the field. Ottenbacher and Short reported that, in 1978, the nature of the research published in the American Journal of Occupational Therapy shifted from primarily descriptive approaches to an emphasis on the use of quasiexperimental designs. This shift was considered a sign of progress; there was a general belief that if we (as practice professionals) would adopt more rigorous, quantitative experimental methods, then theory construction would become substantive, practice would advance, and, ultimately, the reputation for scholarship in occupational therapy would improve.

Recently, however, in occupational therapy and other fields, the nature and uses of qualitative methods have been criticized. For example, in the Presidential Address to the American Evaluation Association, Sechrest (1992) summarized recent literature advocating replacement of traditional quantitative methods with qualitative approaches. Riger (1992) recently proposed that the field of psychology reject traditional, quantitative approaches to the study of human behavior in favor of a feminist empiricism and epistemology (i.e., knowledge base) that address values, contexts, and social institutions.

A similar theme has been proposed in our own field. Yerxa (1987, 1991) called for a knowledge base that is consistent with the wide-ranging philosophy of occupational therapy. The necessary occupational therapy epistemology, she claimed, is not consistent with the reductionism characteristic of quantitative methods; she asserted that only qualitative approaches that allow us to study culture and contexts will support the kind of inquiry necessary for a science of occupation.

There is no doubt that the current sociopolitical climate is one of support for, and investigation of, multiculturalism. Understanding the effect of culture necessitates using methods that enable us to enhance, support, and celebrate diversity. Yet there seems no reason to drop some research methods in occupational therapy as we adopt others. We have sufficient research questions in occupational therapy to support quantitative and qualitative approaches.

As the articles for this special issue were being assembled, Ottenbacher (1992) published an editorial about the qualitative-quantitative research debate. Ottenbacher made two appeals in his editorial: to detach debate about epistemology from methodology and, rather than automatically suspend use of any methodology, to use methods that are appropriate for the nature of the problems addressed. This view asserts that the field of occupational therapy adopt more contextually relevant qualitative methods without simultaneously dropping quantitative approaches. After reviewing the literature pertaining to the qualitative-quantitative debate from the field of program evaluation, Sechrest (1992) similarly pointed out that the early promise of the field of evaluation was that a wide range of methods would be available and would be brought to bear as appropriate on ev-
epistemology should drive the question asked and the methodologies to support a different, contextual epistemology.

In contrast, Ottenbacher (1992) pointed out that "reductionism is not a dirty word, just a word" (p. 873). We agree with Ottenbacher (1992) that methodologies have no specific inherent moral qualities; it is the use to which the methods are applied that become negative or supportive of human values. Furthermore, we contend that reduction and quantity are not synonymous (i.e., quantitative methods need not be reductionistic). We assert that research methods need to be selected according to the questions asked and the nature of the data gathered. Just as epistemology should drive the questions, the questions must direct the methodology, not vice versa.

The quantitative research in our field may have increased, and in some cases improved, yet we still have research questions ahead of us that require quantitative solutions. For example, Riger (1992) posed a challenge "to male dominance" and advocated for "social, political, and economic equity of women and men in society" (p. 731), which she claimed would be accommodated only by using nonreductionistic methodologies to support a different, contextual epistemology.

We believe that with the variety of research mandates facing us in allied health (Bond, 1991; Rothstein, 1992), we will need all the methods we have. Our objective must include and extend beyond that advocated by Ottenbacher (1992). We must not only select the method best suited for the question at hand, but also apply those methods with full understanding of their advantages and their limitations. Moreover, the choice is not quantitative versus qualitative. Within each are numerous alternatives to those we have commonly employed.

In this special issue on measurement and assessment, we have assembled manuscripts that describe applications of some of these alternative quantitative and qualitative approaches that are available for evaluation. The inclusion of these manuscripts is not, however, an implicit endorsement of these particular methods; furthermore, the exclusion of other methods is not an implied statement of rejection. Rather, these articles and their methodological explorations are offered in the spirit of promoting scientific inquiry and dialogue. We believe there are sufficient epistemological questions in occupational therapy to successfully support the use of widely diverse methodological approaches.

As we assembled and edited the manuscripts included in this special issue, we were struck by a sense that much of this qualitative-quantitative debate stems from lack of clarity among various methods and confusion in the use of research-related language. What one researcher might view as quantitative could well be considered quantitative by another (e.g., survey research). Qualitative methods also are currently associated with affective terms such as "feminist" (Riger, 1992), "moral" (Sechrest, 1992), or "holistic" (Ottenbacher, 1992) in contrast to quantitative approaches, which are typified as "reductionistic," "traditional" (Yerxa, 1991), or "male" (Riger, 1992).

Another source of debate emerging in the literature pertains to the use of the terms measurement, assessment, evaluation, and score (Merbitz, Morris, & Grip, 1989; Wright & Linacre, 1989). All of these terms have been associated with quantitative methods and often are used interchangeably, with the implication that numbers are necessarily quantitative. As Michell (1990) has pointed out, this is not the case. To promote detachment of epistemology (and affect) from research methodology, and to further promote scholarly dialogue, we therefore propose generating a common language for reference to the recently debated research methods. We offer the following neutral (we hope) definitions for discussion, adoption, or debate. We have used this language as we edited the series of papers included in this and the preceding issue.

**Assess:** to estimate or determine the significance, importance, or value of; evaluate (Merriam-Webster, 1989).

**Evaluate:** to judge or determine the worth or quality of; estimate (Merriam-Webster, 1989).

Because the terms assess/ment and evaluation have similar meanings, we have used them interchangeably. Although they may be used within specific settings to delineate a hierarchy within the assessment and evaluation process, the term used to denote the higher level interpretation appears to be arbitrary. That is, one of these words is sometimes used to denote the interpretation of a single test and the other word to denote the interpretation of all of the information gathered about the person. Because there appears to be no consistent pattern, we have chosen to use the words interchangeably. However, when referring to the entire information-gathering process, we have used the term assessment process. This process incorporates both quantitative and qualitative methods (e.g., number-based tests and interviews).

**Score:** to assign numbers; the number or rating obtained on a test. Raw score on a test item, total raw score on a test, counts of frequencies of observations (Wright & Linacre, 1989).

**Measure:** to determine quantitative differences in amount based on the use of numeric "units of like kind" (Michell, 1990).

Recently there has been increased concern expressed in measurement literature about the appropriate use of these terms (Michell, 1990). Perhaps we also have tended to inappropriately use the terms measurement, assessment, and evaluation somewhat interchangeably. As discussed in more detail by both A. G. Fisher and W. P. Fisher in this issue, the term measurement
should be used to refer only to equal interval units of measurement such as are associated with the physical sciences. Therefore, we have chosen to edit the papers in these two special issues such that the terms measure or measurement were only used when the data referred to equal interval, linear data (whether they were ordinal data transformed to an approximately interval scale, or were originally interval). We chose to use terms such as evaluation or assessments to refer to various tests or data gathering methods, whether they were designed such that responses were scored on a numeric rating scale, or the data were verbal. Finally, we used the term assessment process to refer to the global process (whether quantitative or qualitative) of gathering and interpreting the results of information about our clients.

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References


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