

Debate, Oh Sweet Debate: Wherein Is Thy Research?

Wesley D. Davis
Escambia County Public Schools

ABSTRACT. Current teacher preparatory instruction in some universities has set the stage for a debate related to qualitative versus quantitative research. In this regard, the present article has a two-fold purpose: (1) to stimulate further debate and (2) to present from a supportive posture the position of quantitative research. Primary issues relate to definition, philosophical context, curriculum content, and perceived expectations. A rebuttal in defense of quantitative research is encouraged.

Some folk just love a good debate. It wakes up those sleeping cells, revitalizes the spirit, and gets the old adrenalin pumping. How about one right here spread across the pages of this journal? Let me fire the first volley, see where it lands, and you fire back at will.

The issue appears to be a fairly simple one. How do we define educational research? This question arises out of a currently popular controversy, both nationally and within this state, over the matter of *qualitative* versus *quantitative* research. To state the question more succinctly, can there be such a thing as qualitative "research" without measurement or quantification? A good many keepers of the fire answer with a resounding and emphatic "NO!" So-called qualitative research is NOT research, so let's not call it such. Let's call it what it is, clearly and simply, observation in a natural setting.

Now we all know that one's observations may or may not be quantified. But this is not the issue. The matter is broader. What stirs the concern closest to home is the university instruction going on across this state under the auspices of qualitative research. Both present and future teachers are led to believe that they are being taught how to do research in the classroom setting. They are to be teacher/scientists in the natural setting of the classroom. They are being told that

what they learn in their "classroom research" is both valid and publishable. Granted, a good many educational journals do have these types of articles. The two main problems with these articles are: (1) they tend to lack the data to support the inferences offered and (2) they seem to be written from an authoritative posture second only to the sermon on the mount.

It should be apparent that what is herein being called research is in the tradition of the natural sciences, especially physics, chemistry, biology, etc. The more rigorous forms of experimental psychology also qualify in the social sciences (Brennan, 1991; Christensen, 1988). It is in the tradition of John Stuart Mill, Roger and Francis Bacon, Wilhelm Wundt, Pavlov, Titchener, Thorndike, Hull, Skinner, and others who follow in their footsteps (Butterfield, 1959; Rand, 1912). There is systematic inquiry, with clear rules and procedures. Questions lead to hypotheses, to a literature review, to observations and data collection, to analyses, to a discussion of the findings, and on to inferences and conclusions. Essentially every systematic inquiry follows this procedure. It is a time-honored tradition that has come to be recognized as scientific research, and it forms the basis for communication among scientists in whatever setting — including the classroom (Campbell & Stanley, 1963; Christensen, 1988; Durso & Mellgren, 1989).

What is being taught in the name of research in some university classrooms today is an affront to this tradition. Both experienced and future teachers are being told: "If what you see going on in the classroom 'feels right,' 'feels good to you,' then that's all the validity you need." "When you see a classroom full of happy kids, kids having fun, enjoying themselves, then you know that learning is going on." Not necessarily so! Any clown can make kids laugh, with or without ice cream and cookies. Taking them to the circus, the zoo, the county fair, the movies, or what have you has also been known to make them happy. I have yet to see where any of this did much to improve reading or math skills. Assumptions are being made because they tend to make these folk feel good. "Happy teachers make happy kids."

This "what feels right" business is also an affront to the educational spirit and tradition of William James (Brennan, 1991). How often we hear the echoes of so-called progressive education: "Tough-mindedness is not for everyone." "We can't afford to let kids fail; it will damage their lives forever." I am not at all sure that the humanistic psychology of Maslow or the Rogerian emphasis on self-concept (Ryckman, 1989) has done any real favors for us — and perhaps least of all for several generations of kids who shy away from competition, make low test scores based on international comparisons, and drop out of school at increasingly alarming rates. We need to begin anew telling kids something other than: "Be happy, feel good about yourself, and the world will take care of itself." It won't.

How does all of this relate to so-called "qualitative research?" It is relevant in that this so-called "research" is one more expression of a soft-minded educational philosophy that attempts to sell present and prospective teachers a bill of goods masquerading as something that it is not. It is only a piece of something, an important piece but not the whole pie. There can be no question that observation is essential to science, to research. It is necessary, but it is NOT sufficient. Moreover, it lacks meaning and credibility without expression in some form of measurement.

What of this controversy about so-called *qualitative* versus *quantitative* research? What I am really talking about is empirical research, by whatever name. There is a format, and that format has been around for many years. It has survived the test of time. It is a formalized way of answering questions with data, of arriving at conclusions that can be validated through replication. It is a way of knowing with a reasonable degree of confidence that what has been observed is or is not a chance occurrence. Merely to feel "right" or "good" about something, and to try to persuade others to feel the same way, is not validation. Neither are group-reinforced pronouncements from an awesomely elevated professorial perch.

Nothing being said or implied here is taking issue with trying to teach teachers to be more sensitive and perceptive. Nor is there any suggested objection to helping them become better observers. There is, however, clear and strong objection to attempts to persuade teachers that in becoming more sensitive observers they have become effective empirical researchers, that they need not be concerned about identifying and controlling variables or applying statistical analyses. They are not being told the whole story. It is only a first step in a process that requires other steps, all of which are important. It matters WHO has observed WHAT in the history of the idea. The methodology that formalizes and facilitates the process cannot be ignored. The instrumentation, the characteristics of the subjects in the sample, the design, the method of data collection and the level of measurement they represent, the statistical analyses, the inferences and conclusions are ALL basic, fundamental elements and steps in empirical research (Durso & Mellgren, 1989). Even beyond this, there must be an awareness of and sensitivity to both potential and actual confounds. The very reaction of the experimenter to what is being observed or measured is certainly a potential confound. Herein lies the need for sensitivity in perception if one realistically expects to end up with generalizable inferences having any semblance of reliability or validity (Durso & Mellgren, 1989). What we think we see may not be what we really see, no matter how good we "feel" about it. "How sweet it is" comes not from some ethereal soar into ecstasy but, rather, from a replicated confirmation at that universally accepted probability level. The world looks flat, and a lot of folk agree and feel good in

their belief that indeed it is; but sound, multivariate empirical research has proven beyond a reasonable doubt that it is round.

If we look at the concept of validity alone, wherein lies the internal or external validity with qualitative research? To hold that "feeling good about one's observations is in itself internal validity" is a farce, in no way consistent with the commonly accepted meaning of this concept. Wherein lies the identification of the independent variable operating in the observational setting and having an impact on the dependent variable, and how is change in the dependent variable registered or assessed? Without this kind of information, one knows not what leads to what, nor what causative factors may be operating within the setting relative to change in any variable being observed. Moreover, even if one does observe change, how does one evaluate that change as a possible chance occurrence? If what one observes occurs at random, by chance, then how does the information gained fit into a theoretical model aimed at accounting for the very behavioral change being observed? Or yet, what is the external validity of that observed change? That is, how does that knowledge, as an explanatory contribution, generalize to observed behavioral change in other persons in other settings? Quite frankly, I do not know; and I, along with some of my peers, would welcome being enlightened by a response across these pages by anyone who does know.

Suppose I assume the response to be that concerns over validity are satisfied through consensual agreement among multiple observers. That's not a bad idea, but it simply won't fly. In 1992 an awful lot of political observers were in solid agreement that George Bush would repeat as President. Wrong. They had a lot of faith, but they either observed the wrong things, or they did not understand the things they observed. Would it be appropriate to say that their inferences lacked predictive validity? I think so. Then comes the counterpoint: "Even the best of quantitative, empirical research leads, on occasion, to incorrect inferences." True. But when that occurs the system tends to be self-corrective. Such findings are rarely replicated. A fellow researcher will point out flaws within the methodology or data analyses or, better yet, identify confounds not recognized by the experimenter. In this systematic, formalized manner, reputable knowledge grows, and such knowledge forms the foundation for new hypotheses, new postulates, and new theories about behavioral change. These stimulate more empirical research, and it is anticipated that this increase in formal knowledge will lead to fewer unexplained observations and few observers wondering about the potential significance of random events. As the wise old owl said to the feely spider: "It is better to 'feel what you know' than to 'know only what you feel'." What say you?

References

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