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Alternative Modes of Inquiry for Agricultural Education

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The Journal of the American Association of Teacher Educators in Agriculture (AATEA) represents the broad research interests of the Agricultural Education profession. As such, it should be representative of the research conducted in the profession. Utilizing classifications interpreted by Borg and Gall (1983) and Kaplan (1963), a review of the articles published in the Journal during 1986 and 1987 revealed that 84% of the articles could be classified as quantitative (they were based upon numerical data), while only some 13% were qualitative (findings were based upon subjective observations). The remaining articles were not research articles but were special articles of interest to the profession.

The Problem

While some might argue with the designation, inquiry in education is based largely upon social sciences (Borg & Gall, 1983, p. 29). It seems appropriate that this field should limit its procedures for inquiry almost exclusively to a single mode of inquiry. The purpose of this paper is, to present three currently recognized modes of inquiry available for research in agricultural education, including those which are alternatives to quantitative approaches.

Procedures

Each of three modes of inquiry will be presented and discussed as a procedure for research in agricultural education. Specific procedures for the conduct of each will not be included. This discussion is drawn, in part, from articles by Smith, Jax, and Coomer in the Fall 1984 issue of the Journal of Vocational Education Research.

Alternative Modes of Inquiry

Popular conception would classify research approaches as either quantitative or qualitative. However, there are currently three modes of inquiry in scientific research identified in the literature which are applicable to problems in agricultural education. They are the positivistic mode, the interpretive mode, and the critical science mode. The positivistic mode is at times called quantitative or empirical-analytic while the interpretive and critical modes are often classified as qualitative procedures. The most dominant in agricultural education research is the positivistic paradigm. The other two are recognized, accepted and utilized to a much less degree among researchers in agricultural education.

Positivism is based upon the theory that basic laws exist which govern all phenomena. Factors within these phenomena can be separated and quantified for statistical analyses; and the researcher is value-free in the research.

Very broadly, interpretivism and critical science are each based upon assumptions that factors within social phenomena are inseparable and, indeed, defined by the interactions of the phenomena and the individuals involved, rather than by natural law. Rather than quantification, each of these modes of inquiry is rooted in phenomenology. Analyses are based upon ethnographic procedures in which the researcher seeks to become a part of the social system or culture under study to determine the meanings behind social interactions.

Positivism

Positivism draws its theories from the so-called hard sciences in which, it is believed, some basic laws exist. It searches for the ultimate truths of these laws by building theory through generalizations which are the result of experimental or mathematical controls. These theories provide for at least five implicit assumptions which underlie positivistic research within social sciences (Pophewitz, 1980):

1. Theory is universal and sets of principles and rules of inference can be deductively arrived at to describe the interaction of social/behavioral phenomenon.
2. A commitment to a universal principle of disinterested, value-free objectivity is important. The values and goals of the investigator are independent of statements of science.
3. Social/behavioral sciences exist as a system of variables and factors which are distinct and analytically separable and can be studied independently of each other.