



Notes about Research


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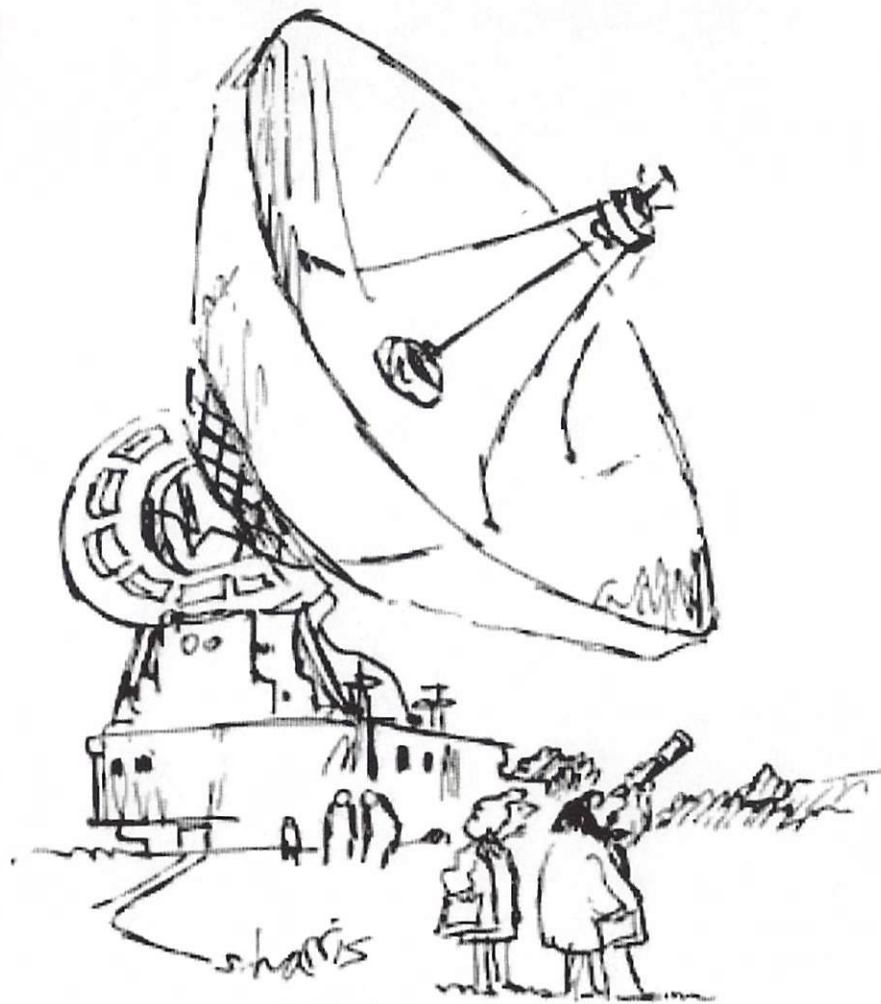
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Everywhere our knowledge is incomplete and problems are waiting to be solved. We address the void in our knowledge, and those unresolved problems, by asking relevant questions and seeking answers to them. The role of research is to provide a method for obtaining those answers by inquiringly studying the facts, within the parameters of the scientific method.

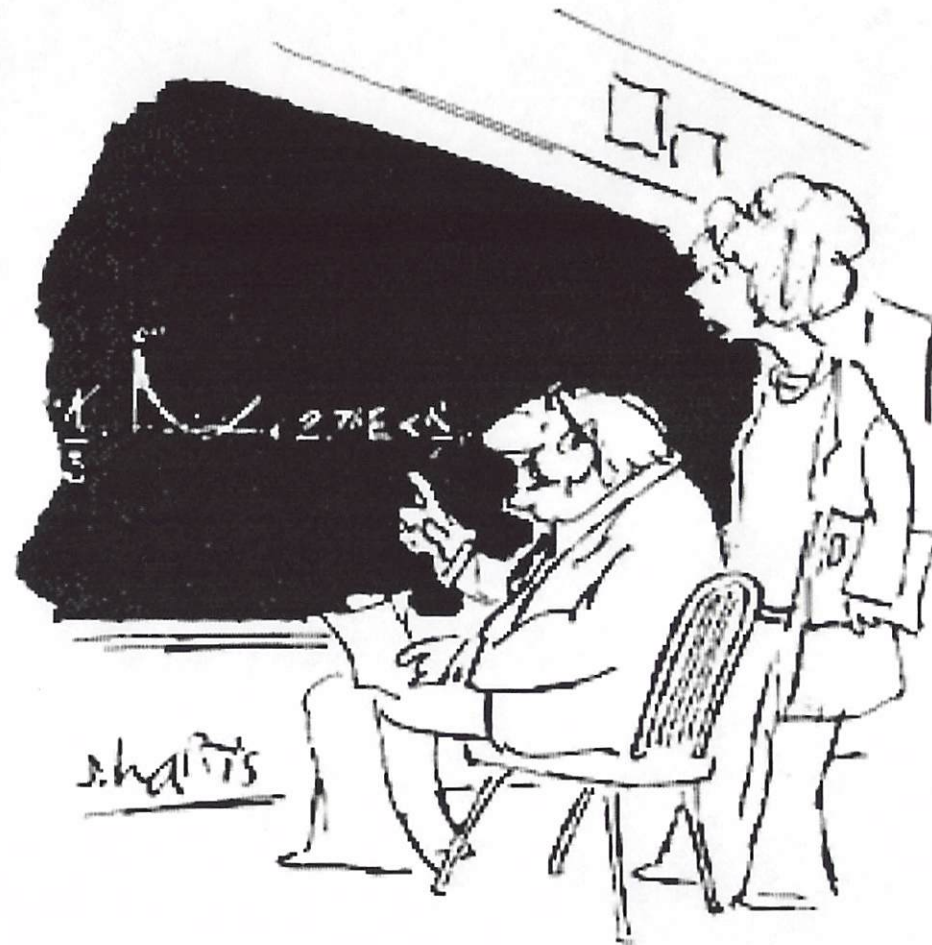
By Sidney Harris



Dr. Antonio A. González Que

"Just checking."

By Sidney Harris




"The beauty of this is that it is only of theoretical importance, and there is no way it can be of any practical use whatsoever."

What research is not




- Research is not mere information gathering
- Research is not mere transportation of facts from one location to another
- Research is not merely rummaging for information
- Research is not a catchword, used to get attention

Distinct characteristics of the research methodology



- It originates with a question
- It demands a clear articulation of a goal
- It requires a specific plan
- The principal problem is usually subdivided into more manageable sub problems
- Research is tentatively guided by constructs called *hypotheses*
- Research will use only hard, measurable data in trying to resolve the problem that initiated it.
- Research is, by its nature, circular, or more precisely, helical (Research begets research)



... The researcher needs an array of means by which data may be discovered and manipulated, and facts made meaningful. The tools of research are merely ancillary to the ultimate goal of research itself: to derive conclusions from a body of disparate fact and discover that which was hitherto unknown.

Paul D. Leedy

The tools of research



- The library and its resources
- Measurement techniques
- Statistics
- The computer and its software
- Languages

Research planning and design



- The problem: the heart of the research project
- The review of the related literature
- Planning the research project
- Writing the research proposal

The problem



The problem is the axial center around which the whole research effort turns. The statement of the problem must be expressed with the utmost verbal precision. The problem is then divided into more manageable sub problems. So stated, we can then see clearly the goal and the direction of the entire research effort.

Paul D. Leedy

The review of the related literature



Those who do research belong to a community of scholars, each of whom has journeyed into the unknown to bring back a fact, a truth, a point of light. What they have recorded of their journey and their findings will make it easier for you to explore the unknown: to help you also to discover a fact, a truth, or bring back a point of light.

Paul D. Leedy

Planning the research project



- Plans
- Specifications
- Criteria (guidelines)
 - can be carried out by any competent person
 - can be repeated
 - specific limitations
 - the data should be susceptible to measurement
- Design

The research proposal

Research is never a solo flight -- an individual excursion. It begins by researchers communicating their thoughts, their plans, their methods, their objectives for others to read, to discuss, to act upon. The overture opening such a research dialogue is the research proposal. As a point of departure, it must be a precision instrument from the first word to the last.

Paul D. Leedy

Content and organization of the proposal



- The problem and its setting
- The review of the related literature
- The data, their treatment, and their interpretation
- Expected results
- The qualifications of the researcher
- The timeline
- A selected bibliography

Methodologies of research design



- The historical method
- The descriptive survey method
- The analytical survey method
- The experimental method

The historical method

Mere happenstance is inimical to the facts of history. Looking behind a random chain of events, historical research decries an underlying matrix of logical cause and effect. And the historical researcher attempts to establish, through the scientific method, a rational explanation for the cause of events and, based upon historical data, a logical interpretation of the effect that such events have upon the lives of individuals and the society in which they live.

Paul D. Leedy

The descriptive survey method

To behold is to look beyond the fact; to observe, to go beyond the observation. Look at a world of men and women, and you are overwhelmed by what you see; select from the mass of humanity a well-chosen few, and these observe with insight, and they will tell you more than all the multitudes together. This is the way we must learn: by sampling judiciously, by looking intently with the inward eye. Then, from these few that you behold, tell us what you see to be the truth. This is the descriptive -- the normative -- survey method.

Paul D. Leedy

The analytical survey method

By the mystery and expressiveness of numbers we can express what is inexpressible, describe what is indescribable, and predict what is reasonable to expect; or infer a logical conclusion to a series of events. Statistics is a language that can speak where other tongues are mute. Words cannot express the concepts that have been reserved for the eloquence and expressiveness of statistics alone. Paul D. Leedy

The experimental method

Progress is relative. We measure progress by noting the degree of change between what was and what is. And we attempt to account for the change by identifying the dynamics that have caused it. This concept is the experimental approach whose purpose is to keep “what was” unchanged, and to see how much “what is” has changed because of an extraneous influence to which we attribute whatever change there is.

The research report



To write a report of one's research that shows fidelity to the facts, the ability to organize them logically, to present them clearly, and to remember there will be a reader who will ultimately read your report: this is to bring one's research effort to its destined conclusion and to share with others your findings and whatever nuggets of truth they may contain.

Paul D. Leedy

The style, the format and the readability of the research report



Dr. Samuel Johnson once said to a young man who was seeking employment with the lexicographer, “Boy, open thy mouth, that I may see thee!” With equal poignancy, one might say to every researcher, “Let me see thy research report, that I may see thee.” For what you put on paper, and how you put it there, reveals your standards of excellence, your knowledge, and the quality of your thinking more eloquently than any other feature of your work.

Paul D. Leedy