

Extract - -

### Study Working Plans

The basis of attack upon a problem is the study aimed at a specific problem or a part of a problem. Working plans define a proposed study or experiment, review pertinent literature, state the specific objectives sought and describe the field and office methods to be employed. They may also include an estimate of the cost in man-power and money and assign responsibility.

The purpose of these plans is three-fold: (1) To require the investigator to plan thoroughly his study or experiment and clarify his mind as to objectives and methods; (2) to facilitate technical and administrative review and criticism and to make plans available to other workers; (3) to make certain that time and changes in personnel do not obscure original objectives and proposed methodology.

All working plans should be written and should form a part of the study file. It is clear that plans will vary in scope and magnitude from the simple, more or less exploratory experiment to the comprehensive long-term experiment. Basic treatment of the written plan, however, should be rather uniform.

The essence of all working plans lies in clear definition of the problem, precise statement of objectives, and a carefully considered method of reaching the objectives. Revision is always possible as experiments dictate and as the original design permits.

The following is an outline of a study or experiment working plan:

1. The Problem.  
State the problem clearly, precisely, specifically.
2. Literature.  
Review pertinent literature and applicable current studies.
3. Objectives.  
State immediate objectives with specific questions to be answered. Discuss separately any more general topics on which the study promises to shed light.
4. Methods.  
Describe the experiment--including both field and office

methods. The design of the experiment with the proposed analysis showing basis of test of hypotheses is particularly descriptive as a summary. Under this head consider whether or not the study permits the formulation of an hypothesis with resulting increase in objectivity of the experiment. Give careful consideration to the selection of variables entering into the experiment including those of time, place, and treatment. Consider the sensitiveness of the experiment, i.e., its size, the number of replications, the amount of basic data, the refinement in measurement needed, etc.; describe the data to be taken, how it will be recorded, etc.

5. Presentation of expected results.

Discuss methods of presentation of expected results, the tabulations and charts contemplated, etc., where possible. This process will help to clarify the value and usefulness of methods described under the preceding items and help to eliminate worthless detail or over-refinements as well as to assure completeness.

6. Personnel assignment, time of completion, cost.

7. Appendix.

List here detailed instructions covering necessary operations, choice of instruments, location of suitable area or materials, details of plot arrangement, etc. Definite provision for revision should be made herein.

It must be at all times remembered that a working plan is a guide, a useful tool, and not a fixed design to be followed slavishly regardless of all developments. Intelligent use of such plans can greatly expedite work and save a great deal of time, effort and money beyond that required to prepare them.

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