4.5. Methodology

Laboratory experiments utilizing a microcomputer to present the experimental treatments and record subject responses are chosen as the methodology for this project. These experiments are primarily theory-building in nature, with the primary objectives to investigate the nature of the relationships among a set of variables. To do this, the research methodology chosen must have a high degree of internal validity. When human are used as subjects, the required degree of internal validity can best be obtained in the laboratory. According to (Stone, 1978), three of the primary advantages of laboratory experiments are: (i) measurement is more precise; (ii) the independent variable(s) of a study can be precisely and unambiguously defined; (iii) laboratory experiments can be replicated.

For these experiments computer programs will be written or adapted to present the subjects with sets of information presentations and questions via video output from a microcomputer. The subject is required to answer the question shown before the next question and information presentation are displayed. Time is measured with the computer. The microcomputer used is an IBM PC AT compatible PC equipped with a high resolution, Professional Graphics monitor and Professional Graphics Adapter.

There are two independent and two dependent variables in these experiments. The two independent variables are the questions the subjects are asked to answer and the forms in which the information is presented. The two dependent variables are the