

## Chapter 2: Research Design

SI = section introduction

1. Research methodology is the science of methods for investigating phenomena (SI).  
Ans: T
2. The purpose of applied research is to develop new knowledge about phenomena such as problems, events, programs, or policies, and their relationships (SI).  
Ans: F
3. Research begins by asking questions (SI).  
Ans: T
4. Quantitative research methods involve the collection of data that can be analyzed using statistical methods (SI).  
Ans: T
5. Both quantitative and qualitative methods are indispensable in addressing questions of basic and applied research (SI).  
Ans: T
6. Research is fundamentally about establishing the nature of things.  
Ans: T
7. Variables are defined as empirically observable phenomena that vary.  
Ans: T
8. Attributes are defined as observable phenomena that do not vary.  
Ans: F
9. Descriptive analysis provides information about the nature of variables.  
Ans: T
10. Relationships involve specifying which variables are related to each other, and the ways in which they are related to each other.  
Ans: T
11. Relationships in social science are usually deterministic in nature.  
Ans: F
12. A single exception will normally disprove claims about relations in social science.  
Ans: F
13. Relationships also are distinguished as being either causal or associational.  
Ans: T
14. Distinguishing between independent and dependent variables is a cornerstone of research.  
Ans: T
15. Causation requires both (1) empirical (i.e., statistical) correlation and (2) a plausible cause-and-effect argument.  
Ans: T
16. A theory exists for just about every relationship in social science.  
Ans: F
17. Program evaluation involves three steps.  
Ans: F
18. Control variables are always dependent variables.  
Ans: F
19. Rival hypotheses are plausible counter explanations for relationships that are found.  
Ans: T

20. Classic experimental designs are widely used in public management and policy for determining the effect of new policies and programs.  
Ans: F
21. Statistics is the only way for dealing with rival hypotheses.  
Ans: F
22. If X causes Y (or in notation,  $X \rightarrow Y$ ), then X is called the dependent variable because it affects Y.  
Ans: F
23. Threats to external validity are defined as those that jeopardize the generalizability of study conclusions about program outcomes to other situations.  
Ans: T
24. Threats to internal validity are those that jeopardize the study conclusions about whether an intervention in fact caused a difference in the study population.  
Ans: T