Characteristics (C) / Assumptions (A) of Research	
Control (C)	Holding constant or eliminating extraneous variables to establish cause-and-effect relationships.
Operationalism (C)	Defining scientific concepts by the specific operations used to measure them. This includes multiple operationalism, where constructs are represented by multiple measures.
Replication (C)	The reproduction of results from one study in additional studies to verify findings.
Uniformity or Regularity in Nature (A)	The assumption that there are consistent and lawful relationships in nature.
Reality in Nature (A)	The belief that the phenomena studied by scientists are real and observable.
Discoverability (A)	The assumption that these regularities and realities can be discovered through scientific investigation.

Research Approaches	
Research Settings	Field Experiments, Laboratory Experiments, Internet Epxeriments
Field experiments (RS)	Artificiliaty not a problem, but cannot control extraneous variables like in a lab
Laboratory experiments (RS)	Ability to control extranueous variables, but introduce artificiality and poor ecological validity
Internet experiments (RS)	Easy access, large samples and low cost, but lack of experimenter control, self-selection, drop out and multiple participant submissions
Descriptive Research (T)	Observing, recording and describing behaviour

Research Approaches (cont)	
Relational/Predictive Research (T)	Describing and detecting/predicting relationships
Causal Research (T)	Describing behaviour, predicting relationships AND exploring cause-and-effect
Qualitative Research (A)	Non-numerical, interpretive approach
Quantitative Research (A)	Numerical data
Mixed Methods (A)	Mixes Quantitative and Qualitative Research for more complete account
Quantitative Experimental	Before making causal claim, three criteria: Co-variation (changes must be correlated), Temporal ordering (cause must precede effect), no Alternate Explanations
Between-subjects design	Different participants exposed to each level of IV

Research Approaches (cont)

Within-subjects design	All participants exposed to all levels of the IV	
Ads/Disads of Experimental Research	Causal inference, ability to manipulate variables, control	Does not test effects of extraneous variables, artificiality, inadequate method of scientific inquiry
Quantitative Non-experimental	No manipulation of the IV, descriptive research, identifies factors/relationships to form hypotheses to then be tested through experimental	
Types of Quan Non-Experimental	Correlational study, Natural manipulation, cross-sectional and longitudinal	

Research Approaches (cont)

Ads/Dis-Ads of Each Type	Research objectives of description and prediction, Research objectives of description and prediction, Multiple Groups/Time points to consider	Sometimes false assumption of causation, false assumption of causation, cross-sectional/longitudinal do not always produce similar results
Strenghts/Weaknesses of Qualitative Research	Many different data collection methods, good for describing/understanding, provides data to develop theory	Difficult to Generalise, varying interpretations, objective hypothesis testing procedures not always used

Six Data Collection Methods

Observations	Researcher watches and records events/behaviours. Naturalistic or Laboratory Observations	Provides firsthand information, allows for study of natural behaviour, captures non-verbal cues, usually exploratory/open-ended	Reactive effect if repsondents know they are being observed, investigator effects (personal bias), data analysis is time-consuming

Six Data Collection Methods (cont)

Questionnaires	Measures participants' opinions and provides self-reported demographic info. Closed-ended or open-ended questionnaires	Efficient for large sample, standardised format for easy comparison	Resp bias, limite depth info, poter for m erpre ation
Existing Data	Collection of data that was left behind/used for something different before the current research. Documents, physical data, etc.	cost-effective, time-saving, allows for longitudinal studies	data be incor lete/ ated of co over colle meth
Interview	Can be through multiple mediums (face-to--face, phone, etc). Can be synchronous (happens in real-time) or asynchronous (over-time)	Good for measuring attitudes, allows for probing, in-depth info, useful for hypothesis testing	Peop migh recal impo info, react effec inves igato effec expe and conu smin

Six Data Collection Methods (cont)

Focus Groups	Collection of data in a group situation where moderator leads discussion with a small group	Useful for exploring ideas and concepts, provides window into internal thinking, in-depth info, can be taped	Can be ex, difficult to find good moderator, reactive and invest-igator effects, measur-ement validity low
Tests	Data collection instru-ments designed to measure something. Standa-rdised (existing, tested in previous research) or Resear-cher-cons-tructed (new, often specifically developed to test for variables)	Provides measures of many character-istics, usually alr developed, availability of data to reference, easy data analysis	Can be ex, reactive participant effects, might not be appro-priate for certain samples, open-ended Qs not avail