

BTC WORKSHOP: ACTION RESEARCH



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GUIDING QUESTIONS

- What are the key variables, topics, problems, issues, concerns students are likely to study?
- How can I get students to focus/refine their research problem?
- How do I know that research questions are suitable?
- What is the purpose of the triangulation matrix and intervention plan?
- Who do I analyse and report qualitative and quantitative data?
- What comprises the methodology section of the study?

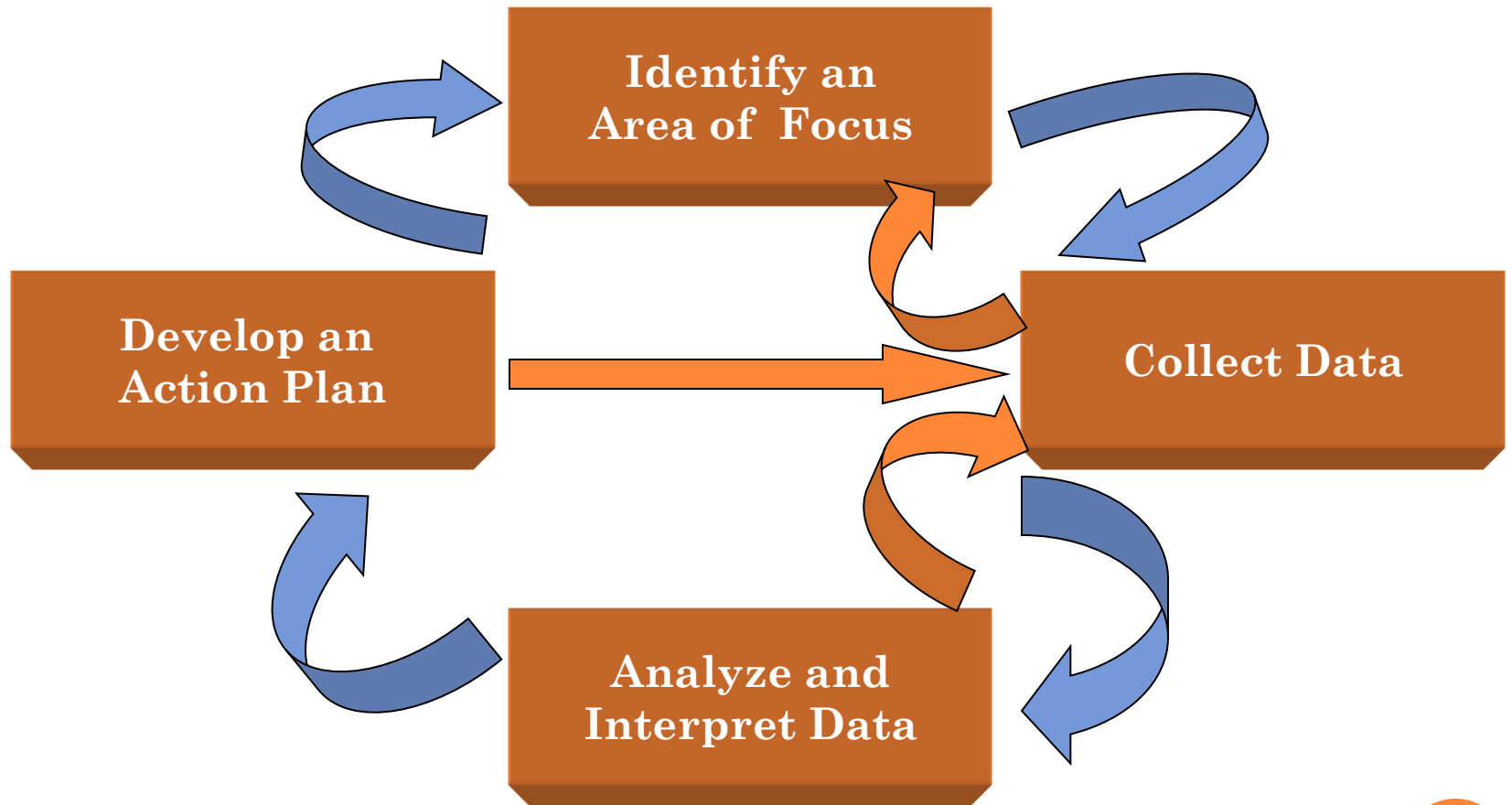
ASSESSING KNOWLEDGE BASE

K	W	L

WHAT IS ACTION RESEARCH?

- **Action research is systematic inquiry done by teachers (or other individuals in an educational setting) to gather information about, and subsequently **improve**, the ways their particular educational setting operates, how they teach, and how well their students learn (Mills, 2000).**

MILL'S (2000) ACTION RESEARCH SPIRAL



THE RESEARCH PROBLEM AND OTHER RESEARCH STEPS

- **A research topic** is the broad subject matter being addressed in a study.
- **A Research problem** is an educational issue or problem in the study
- **A purpose** is the major intent or objective of the study.
- **Research questions** are questions the researcher would like answered or addressed in the study.

STUDENT TOPICS

1. What are the possible student topics?
2. What is the difference between the general problem and specific research problem?
3. Are they content focused or socially oriented?
4. What is the relationship among **introduction to educational research** course, third year practicum and **applied research** course?

EXAMPLE

- **Topic:** Cooperative Learning and student outcomes
- **Research Problem:** Use of cooperative learning Strategy to improve Students' Class attendance, Class Participation, and Achievement in (subject) for Grade x at School y.
- **Purpose of Study:** To explore how the use of cooperative strategy enabled students to improve their attendance to class, encourage greater participation in class activities, and improved their final grade.

RESEARCH QUESTIONS

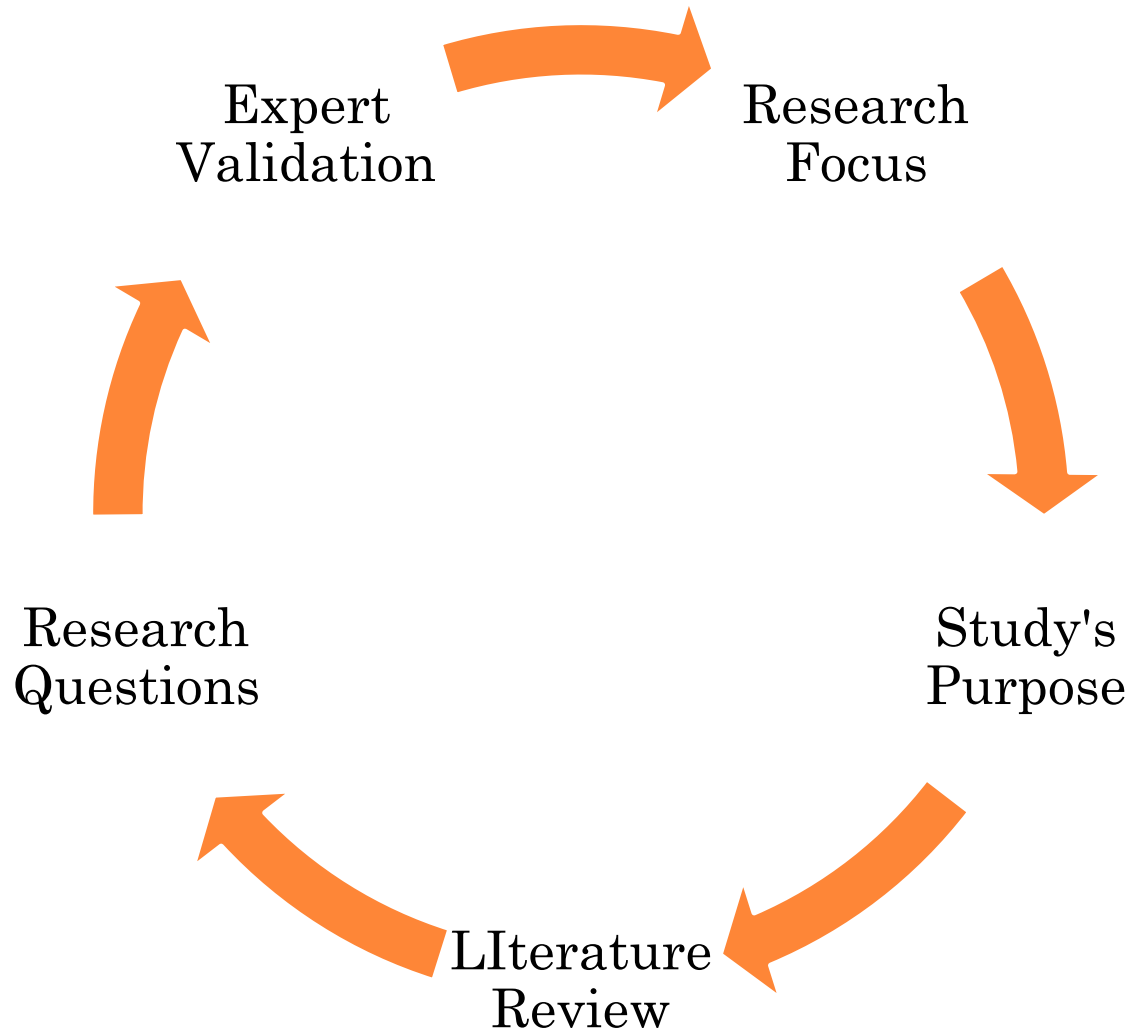
1. What were students' experiences with the use of the cooperative learning strategy for class/grade x at school y?
2. To what extent did the use of cooperative learning impact students learning outcomes?

GROUP ACTIVITY

Grab bag to select topic

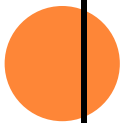
1. Select a research topic
2. Rewrite to obtain a specific research problem
3. Write the purpose of the study
4. Write two applicable research questions

DECIDING ON RESEARCH QUESTIONS



TRIANGULATION MATRIX

No.	Research Questions	Data Source # 1	Data Source #2	Data source # 3	Data Analysis Strategies
1	What were students' experiences with the use of the cooperative learning strategy for class/grade x at school y?	Student journal	Teacher journal	Student Focus Group Interview	Content Analysis
2	To what extent did the use of cooperative learning impact students' learning outcomes?	Student journal Teacher journal	Attendance Score Participation Score	Student Test Scores	Content Analysis Descriptive Statistics



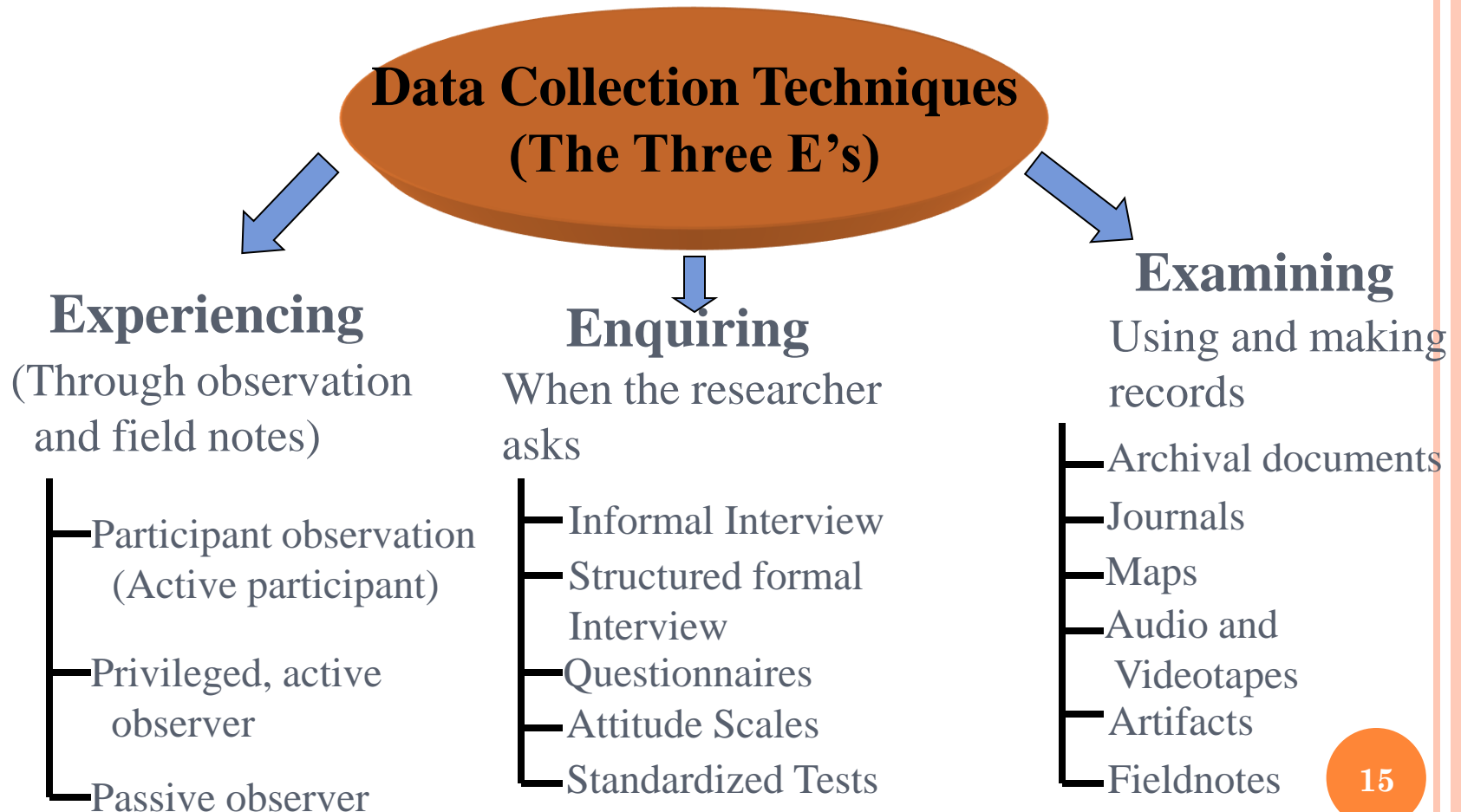
ACTIVITY

- Develop your triangulation matrix based on your completed research questions?

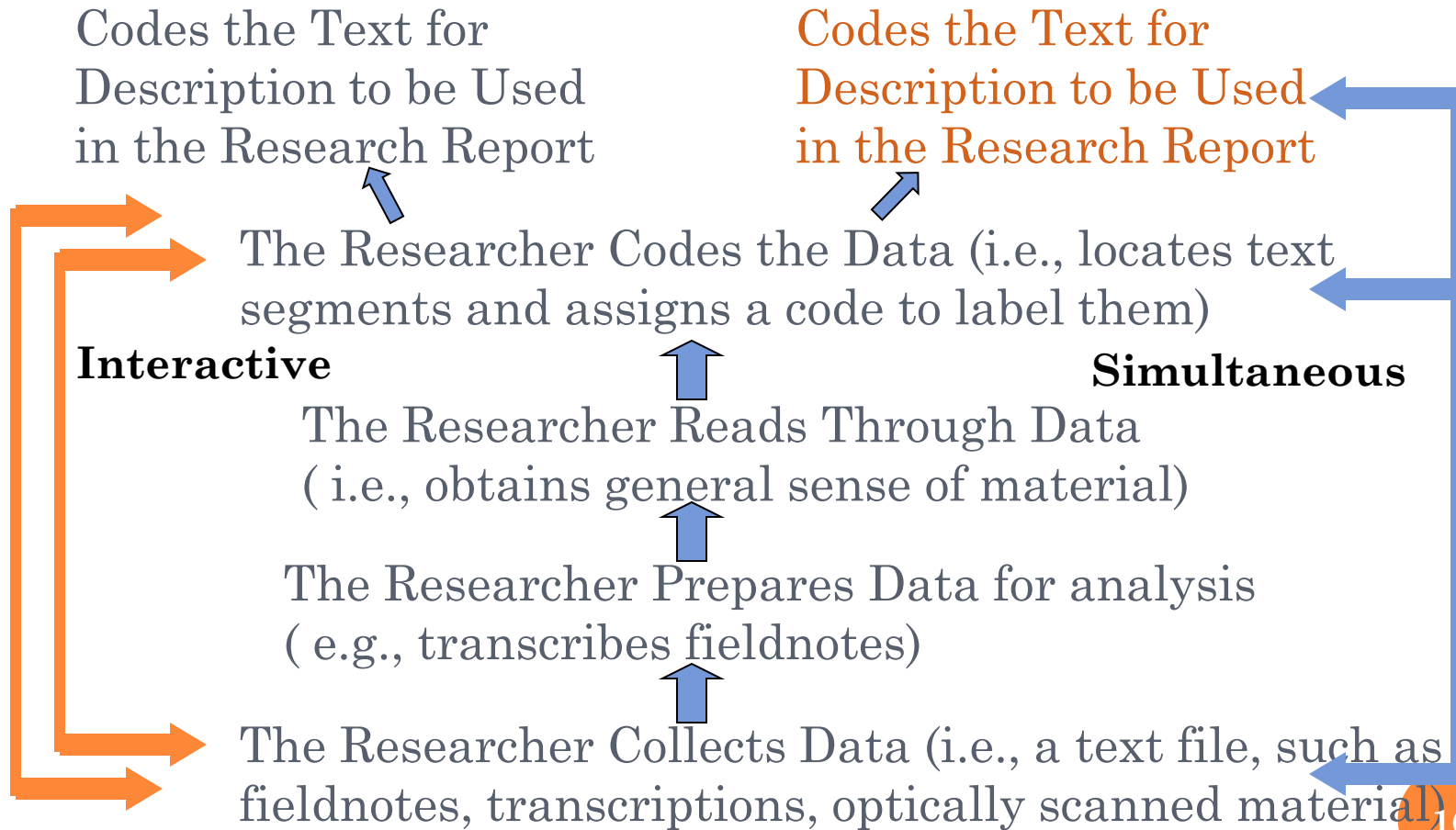
INTERVENTION PLAN

- What is the purpose of the intervention plan?
- What are the critical attributes of the intervention plan?
- How does the intervention plan relate to the practicum lesson plans?
- Baseline data, Why is it needed?

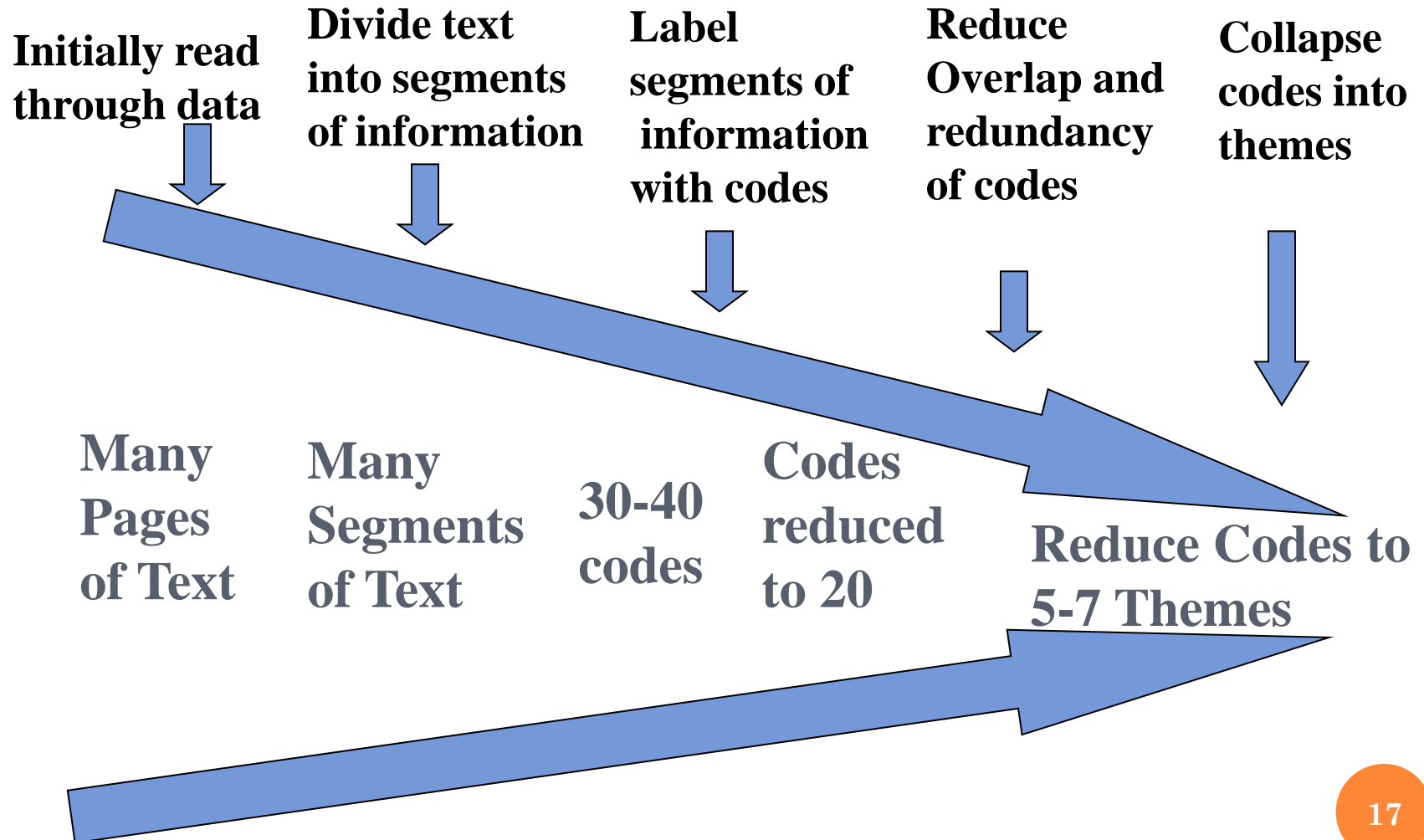
RESEARCH DATA COLLECTION TECHNIQUES



THE QUALITATIVE PROCESS OF DATA ANALYSIS



A VISUAL MODEL OF THE CODING PROCESS IN QUALITATIVE RESEARCH



DESCRIBE THE SETTING AND DEVELOP THEMES

- Themes address the major research questions
- Procedures
 - Code text (or image) data
 - Develop a description from the data
 - Define themes from the data
 - Connect and interpret themes

CONTENT ANALYSIS EXAMPLE

No.	Interview questions	Summary responses
1	Describe your experiences in the class/course?	<ul style="list-style-type: none">• Empowering, catering for different learning styles• Group learning and family setting helped me to learn better• Lecturer courteous and respectful• Environment conducive to learning• Group members assisted me and kept me on track• Variety of teaching strategies engaged me and made learning fun
2	How did the teaching strategies used in the class enhance your learning?	<ul style="list-style-type: none">• Cooperative learning strategies such as random call cards, think-square-share, round table, etc. help me to learn better• Not boring and forces you to pay attention

CONTENT ANALYSIS EXAMPLE

No.	Interview questions	Summary responses
3	How did the cooperative learning motivate you to be present at class, and assisted you in participating in class activities?	<ul style="list-style-type: none">• Learning is fun as we get to present what we have learnt and we can be creative in the presentations• Use of skits, dub poems, etc make learning fun and make learning memorable• Learning in this class is fun and so I like coming to this class and I am usually early as I am the social monitor in the group.
4	How did the cooperative learning assisted you in improving your performance in the course?	<ul style="list-style-type: none">• I learn a lot from discussions and sharing information and resources• I benefit from sharing of resources in the group• I am able to be focused on learning better than if I work by myself

THEMES: COLLEGIALITY

- **Students acknowledged repeatedly of the benefits of working together and the family setting in which friendship is valued and motivate us to learn and support each other. One student commented, “I have grown to respect my group members as I feel they are genuine and there for me”. Another student said that, “ I feel more confident in expressing myself as my group members do not cow me down but give me a chance to express myself” (Vol. 1, p. 1).**

IDENTIFY DATA OPTIONS: CHOOSE TYPES OF DATA MEASURES

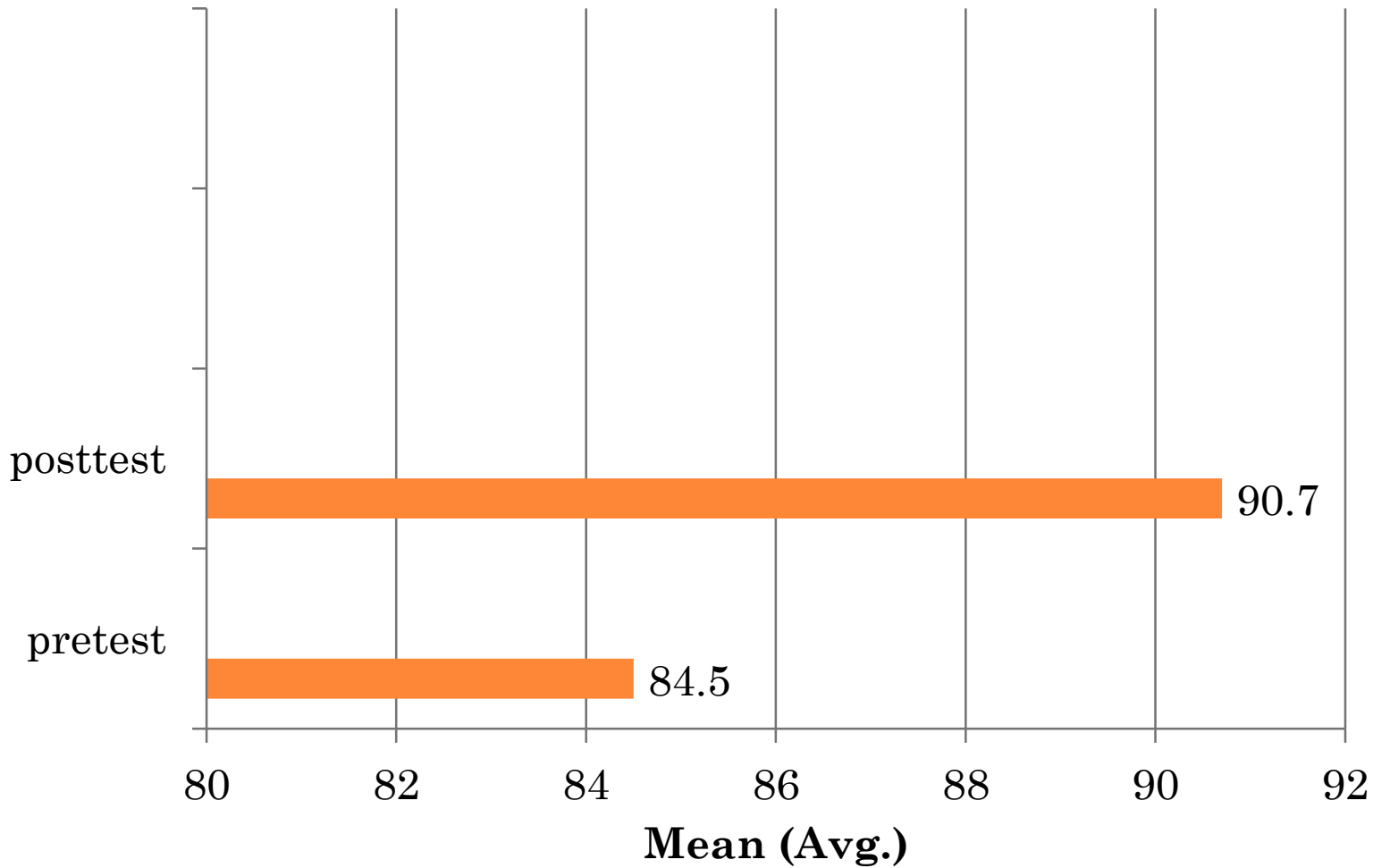
- An instrument is a tool for measuring, observing, or documenting quantitative data
- Types of Instruments
 - Performance Measures (e.g. test performance)
 - Attitudinal Measures (measures feelings toward educational topics)
 - Behavioral Measures (observations of behavior)
 - Factual Measures (documents, records)

DESCRIPTIVE STATISTICS

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Attendance Scores	20	50.00	100.00	86.6000	11.47721
Participation Scores	20	60.00	100.00	84.5000	8.87041
Pre-test	20	65.00	100.00	84.5000	11.45931
Post-test	20	70.00	100.00	90.7500	10.91534
Valid N (listwise)	20				

GRAPHICAL REPRESENTATION



FURTHER DATA ANALYSIS

- Graphical Representations
- Discussion of Findings
- Conclusions
- Recommendations

CLOSING THOUGHT

- **"It is a capital mistake to theorize before one has data."** --- Arthur Conan Doyle