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| 32144 Technology Research Preparation | **Week 7 Tutorial 6 Overview** |
| **Topics** **Covered:** | Preparing a research proposal |
| Exploring Research Methods |
| Quantitative, Qualitative, or Mixed? |
| **Points:** | 6 |
| **Date Due:** | Week 7 – In Class |
| **Submission** | In-class contribution to discussions |
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**Week 07 Tutorial 06 Preparation**

**UNDERSTANDING research MODELS, METHODs & ACTIVITIES** – Read the following description and summary about research models and methods. With your understanding of research methods, you will revisit your research problem, question, stakeholders, and literature before selecting a suitable research model and method for your proposal.

**Understanding Qualitative v’s Quantitative Research Models & Methods**

Quantitative research methods describe and measure the level of occurrences on the basis of numbers and calculations. Moreover, the questions of “how many?” and “how often?” are often asked in quantitative studies. Accordingly, quantitative data collection methods are based on numbers and mathematical calculations.

Quantitative research can be described as ‘entailing the collection of numerical data and exhibiting the view of relationship between theory and research as deductive, a predilection for natural science approach, and as having an objectivist conception of social reality’. In other words, quantitative studies mainly examine relationships between numerically measured variables with the application of statistical techniques.

NB: There are three main types of research models, including:

1. Qualitative,
2. Quantitative, or
3. Mixed/ Various Method Models (could be mix of qualitative, quantitative, or both)

The table below illustrates the main differences between qualitative and quantitative data collection and research methods.

**Main differences between quantitative and qualitative methods**

|  |  |  |
| --- | --- | --- |
|  | **Quantitative**  | **Qualitative**  |
| Requirement | Question | Hypothesis | Interest |
| Method | Control and randomization | Curiosity and reflexivity |
| Data collection | Response | Viewpoint |
| Outcome | Dependent variable | Accounts |
| Ideal | Data | Numerical | Textual |
| Sample size | Large (power) | Small (saturation) |
| Context | Eliminated | Highlighted |
| Analysis | Rejection on null | Synthesis |

**Understanding Types of Research Methodology**

Broadly, the following list of research are available to you that you might think about implementing:

|  |  |
| --- | --- |
| 1. Historical - Qualitative
2. Comparative - Qualitative
3. Descriptive - Qualitative
4. Correlation - Quantitative
5. Experimental – Quantitative
6. Evaluation - Qualitative
 | 1. Action - Qualitative
2. Ethnographic[[1]](#footnote-1) - Various - not quantitative
3. Ethnogenic[[2]](#footnote-2) - Various - not quantitative
4. Feminist/ Identity Politics - Various - not quantitative
5. Cultural - Various - not quantitative
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**Understanding Types of Data Collection**

Quantitative data collection methods are based on random sampling and structured data collection instruments. Findings of quantitative studies are usually easy to present, summarize, compare and generalize.

Qualitative studies, on the contrary, are usually based on non-random sampling methods and use non-quantifiable data such as words, feelings, emotions etc.

NB: Whilst this is not an exhaustive list, the following list of example techniques and activities are available to you that you might think about implementing.

**Common qualitative data collection methods.**

1. Observations: recording what you have seen, heard, or encountered in detailed field notes.
2. Interviews:  asking people questions in one-on-one conversations.
3. Focus groups: asking questions and generating discussion among a group of people.
4. [Surveys](https://www.scribbr.com/methodology/survey-research/): distributing questionnaires with open-ended questions.
5. Secondary research: collecting existing data in the form of texts, images, audio or video recordings, etc.

**Common quantitative data collection methods.**

1. Experiments.
2. Computer Simulation and Agent-Based Models
3. Controlled observations.
4. Surveys: paper, kiosk, mobile, questionnaires.
5. Longitudinal studies.
6. Polls and Telephone interviews.
7. Face-to-face interviews.

**Week 07 Tutorial 06 In-Class Activities**

**ACTIVITY 1: PREPARING TO UNDERTAKE your research PROPOSAL** – Answer and discuss in breakout groups your responses to the following questions. NB: Please discuss with your tutor.

* 1. Are you interested in continuing the research area/ problem that was the topic of your literature review…?

**YES** [ ]  – Great! Continue to Question (b)

 Insert preliminary title, then continue to Question (b)

Click or tap here to enter text.

**MAYBE** [ ]  – What are your concerns? Has a related topic emerged?

Describe your concerns and preliminary/ emergent ideas below, then continue to Question (b)

Click or tap here to enter text.

**NO** [ ]  – What are your concerns?

Describe your concerns below, then continue to Question (c)

Click or tap here to enter text.

* 1. Do you feel familiar with the related literature?

**YES** [ ]  – Great! Continue to Question (d)

**SOMEWHAT** [ ]  – What are your concerns?

Insert preliminary title and describe your concerns below, then continue to Question (d)

Click or tap here to enter text.

**NO** [ ]  – What are your concerns?

Describe your concerns below, then continue to Question (c)

Click or tap here to enter text.

* 1. Would you like to learn more about the industry context of your research proposal?

**YES** [ ]  – Great! You’re ready for Activity 2

**SOMEWHAT** [ ]  – What are your concerns?

Insert preliminary title and describe your concerns below.

Click or tap here to enter text.

**NO** [ ]  – What are your concerns?

Describe your concerns below.

Click or tap here to enter text.

**ACTIVITY 2: preparing your research PROPOSAL** – think about the research gaps that your proposal addresses, write the problem statement, and the significance of your research.

1. **BRAINSTORMING your research PROPOSAL** – Set a timer for five minutes. Use brainstorming or idea mapping to create a list of research topics/ problem areas that have emerged from your Literature Review and can developed further into your research proposal. Answer and discuss in breakout groups your responses.

Your brainstorming results/ ideas map. List as many ideas related to your research proposal topic as you can

Click or tap here to enter text.

1. **DEVELOPING YOUR research PROPOSAL IDEA/S** – Set a timer for five minutes. Develop a problem statement that in your Research Proposal? Answer and discuss in breakout groups your responses.

Research problem statement.

Click or tap here to enter text.

1. **IDENTIFYING CONTRIBUTION OF research PROPOSAL IDEA/S** – Set a timer for five minutes. Identify your stakeholder and describe the main motivation and contribution that you are seeking to make by addressing the research. Answer and discuss in breakout groups your responses.
2. Stakeholder.

Click or tap here to enter text.

1. Main motivation for undertaking the research.

Click or tap here to enter text.

1. Contribution and significance of the research.

Click or tap here to enter text.

**ACTIVIY 3: EXPLORING research MODELS, METHODs & ACTIVITIES** – Set a timer for five minutes. Based on your reading and discussion of research models, methods and activities, explore what potential research models, methods and activities that you might suggest in your Research Proposal. Answer and discuss in breakout groups your responses.

1. Nominate the potential **research model** that would support your research proposal and explain why (Qualitative, Quantitative, Mixed/ Various)

Click or tap here to enter text.

1. List the type of **research methodologies** that you could potentially implement to achieve your research aim.

Click or tap here to enter text.

1. List the type of **research techniques** and activities that you could potentially implement **to collect the data** you require to achieve your research objectives.

Click or tap here to enter text.

1. Branch of anthropology that deals with the description of specific human cultures, using methods such as close observation and interviews. [↑](#footnote-ref-1)
2. Branch of ethnology that deals with the origin of races or peoples [↑](#footnote-ref-2)