**Lecture 5**

**Differences between methodology and method**

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A method is simply the procedure you use to accomplish an objective. Methods are familiar to people in everyday life as well as to researchers. If you want to grow flowers in a garden, the method might include buying the seeds, digging a hole, planting them, and watering them.

Method: doing the work

Methods are the actual tools and techniques used to collect and analyze data or information. This includes:

Analytics

Tracking analytics on a website allows testers to see where users are clicking and spending the most time.

Heatmaps

A heatmap is a valuable tool for visually tracking user behavior on a website. A heatmap provides precise data on the user's mouse movements on a site. One way they are used is to test the positioning of elements on a page. For example, users may spend more time looking at an image higher on a page or on the left or right side.

Case studies

A case study is a detailed analysis of an individual or group. UX Collective provides many examples of UX case studies, including companies such as Lyft, Fitbit, and BBC.

Focus groups

Focus groups are interviews conducted with a group of people who share certain characteristics relevant to the research. A focus group for a productivity app might be small business owners. For medical research, it could be people who have a specific illness.

User testing

User testing can be an effective way to get both quantitative and qualitative feedback from users. Quantitative feedback provides numerical results, such as 70% of users successfully completing a task within five minutes.

Qualitative feedback provides non-numerical but equally valuable feedback, such as opinions and insights. A user might say, for example, "I found the instructions confusing in Section 1."

Adobe provides some examples of effective methods to consider for usability testing. These include guerilla testing, where researchers recruit members of the public in a public place to test product features. Another common method is lab testing, where subjects are tested in a more formal environment. Another possibility is remote testing, such as users testing an app or website from their phones or laptops.

Methodology: strategizing your approach

While methods are the tools used in research, the methodology is the underlying strategy used in the research study. You need a methodology before you select the best tools or methods to conduct the research.

Researchers will consider the most useful methods at the stage of identifying methodology. They may consider qualitative vs. quantitative research, analytics, and heatmaps. They may decide to combine these and other methods.

As the methodology concerns the overall purpose and goals of research, it requires a broad, big-picture perspective. When forming or questioning methodology, you must consider the case for using or not using various methods.

Methodologies are typically divided into the categories of qualitative and quantitative. Surveys are commonly used quantitative tools (surveys can also be qualitative if they ask participants open-ended questions). Research often incorporates both quantitative and qualitative methods. The following are some common examples.

 Ethnographic — Ethnography is a type of research where people are observed in real-time. Researchers might observe how users interact with an app or website in UX.

 Phenomenological — Phenomenological research is concerned with people's life experiences. This type of qualitative research relies on interviewing subjects and asking for their opinions and experiences.

 Participatory — Participatory research and design is a process where participants are actively involved. However, this can be costly and time-consuming for UX research. Still, it's also advantageous because the designs are based on the user's direct input.

The objectives of methods and methodology

The methodology aims to explain the researcher's approach to the subject. It presents a case for the type of data collected, the data collection methods, the types of analysis, and other aspects of the research.

Methods are the tools used in the research. If a researcher is conducting interviews, this would be one of the research methods. The methodology would explain or justify why these interviews are useful to the research.

Both methods and methodology play an essential role in research. The objective of the methodology is to define the purpose of the research. Mentoring.org, in its paper UX Research 101, defines research methodology as relying on the "research goals, questions, and problem space."

Examples of when to use method and methodology

Both method and methodology are essential for research. You choose the methodology before doing the research. This determines your strategy and the methods for carrying out the research. The methods are applied during the actual research.

For example, suppose researchers want to test the benefits of a new app. In that case, they may use an agile testing methodology, which emphasizes getting continuous feedback from users and making consistent improvements. User testing would be a helpful method for this type of research.

How does approach and methodology differ?

A research approach and methodology are both relevant to the research but are not identical. An approach is a general style or set of methods used in the research. A methodology is a structured and tested approach that has proven its usefulness. So an approach isn't necessarily a methodology, but a methodology is a highly structured approach.

How to write the method and methodology section of a research paper

Research papers often have a methodology section that clarifies the project’s intent and what questions it intends to answer. In this section, the writer will justify why they chose the approach taken in the paper. Writing down the research parameters in conducting UX research can be similarly helpful.

This section of the report should contain the following:

 An explanation of why data is being collected or how it will help answer the question or problem the paper addresses

 A summary of how the data was collected, including the tools or processes used in data collection, the sample size, and how data was recorded

 A justification of the methods used in the paper, e.g., how a qualitative phenomenological approach to research can be useful in understanding life experiences

 Explaining how you avoided or accounted for research biases such as confirmation bias, observer bias, etc.

Researchers need to understand both methods and methodology

Both methods and methodology are fundamental to research. It's important to understand the role each plays and how they differ. You need a methodology to establish the strategy and purpose of your research. The right methods are needed to collect and interpret data and reach the appropriate conclusions.