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CASE STUDY OF AUDIO/VIDEO TECHNIQUES.

Audio/video is an observation-recording tool that can be employed by users to record, review and analyse behaviour or actions in specific scenarios. Audio/video can be easily combined with other design research methods such as interviews, guided tour, and task analysis, to record user experience or interaction with a prototype, a digital or non-digital product and services.

**BASICS: Audio** is refers to sound, as it is transmitted in signal form **.** An **audio signal** is a sound, typically using either a changing level of electrical voltage for analog signals, or a series of binary numbers for digital signals. Audio frequency, a frequency in the audio spectrum.A video is a series of pictures stitched together to give the impression of continuous motion. A video normally comprises of 24-30 frames per second (fps) which means that a 5 – second video shot at 15 fps, is made up of 75 photos (frames). A normal video, which is played back at the same frames per rate as it is recorded, also has an audio component. audio, as well as video, these are recorded to capture a process, interaction or a scenario.

How to conduct Audio/ Video analysis

The equipment required to record the voice memos or videos is a camera , a tripod and a remote. This equipment can be set-up in the same scenario with different users or different scenarios with the same users or user groups. The videographer can be different. In situations where the user presence is either not required or could affect the participant’s behaviour, an audio/video recording mechanism may be set-up in advance, the media can be recorded during the activity and the researcher can listen or view the recording later.

A number of techniques can be employed to analyse audio and visual data to study the interaction between people, digital and non-digital products and prototypes. Both audios, as well as video, data allow researchers to collect and analyse data, and disseminate findings to a wide variety of audiences.

## What are various types of Audio/ Video analysis?

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| Method | Purpose | Advantages | Disadvantages |
| Open approach | The open approach allows for discoveries where no initial patterns have been identified, limiting any preconceived barriers by the designer. | * Chances of identifying criticalities are higher. * As the researcher listens or views the recording with an open mind, the possibility of introducing bias or overlooking details is lower. | Different participants or user groups may approach the scenario being recorded differently, which can add complexity when consolidating findings. |
| Closed approach | The second approach is in direct contrast to open approach. Here, the researcher analyzes the footage for a specific event, or with respect to a specific hypothesis that matter to the participants and/or to the research project. | As the problem statement or the question to which the researcher is seeking answers is already defined, it is a quicker approach to open. | * Chances of introducing researcher bias. * Chances of missed specific details because the researcher is looking for answers to existing questions. |
| Focused | In the focused approach, specific interactions are selected and examined for analysis. The focus is on a specific subject or content. | * Quicker than the open approach. * The researcher can devote attention to specific portions of the footage. | Other areas of the audio or video that may be relevant to the subject under consideration may go unheard or unseen. |

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## Advantages of Audio/Video Analysis

### 1. Large sample sizes

Audios/videos can be recorded for a large number of individuals at the same time for the same or different scenarios; the only requirement is the equipment accompanying the researcher or independent of the researcher.

### 2. Researcher presence

In cases where a senior researcher needs to be present for a certain observation but is unable to attend a session, the session can be recorded for the researcher to review later and document their findings.

### 3. No researcher influence

In cases where the recording is done independent of the researcher, the researcher cannot influence the user’s behavior or interactions.

### 4. Missed details

In cases where the researcher was present during the recording, any details that the researcher could have missed can be reviewed and documented when reviewing the audio/video.

## Disadvantages of Audio/Video Analysis

### 1. Time-consuming and costly

The review and analysis of audios/videos is time-consuming. Again, with more number of audios/videos to record, the requirement for equipment and audio recorders/videographers goes up. Similarly, in case the user groups or individual users being shot are experts, they’ll charge a fee to participate in the research.

### 2. No probing

In cases where the researcher isn’t present at the time of shooting the audio/ video, if later the researcher spots an interesting action performed by the users, there is no possibility of probing the user further.

### 3. Researcher attitudes

In some studies, when the researcher is aware that an audio/video is being recorded, they can become relaxed during the session because any missed detail can be revisited when reviewing the recorded media.