USER-CENTERED DESIGN CSP 588

Participation – P2

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Participation – 2

Q) Analyze a way in which UX engineers can become aware of user needs that focuses on both effectiveness and efficiency.

- Describe your “data gathering” scenario.

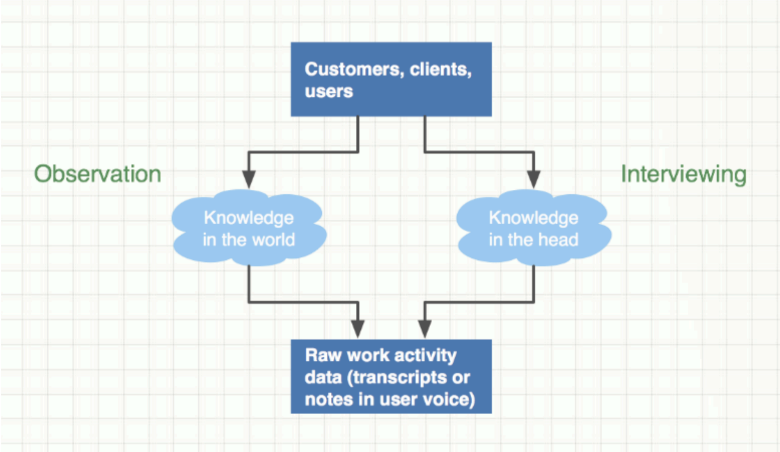
  When UX engineers apply a user-centred design approach that prioritises efficiency and effectiveness, they can become aware of user needs. Using a variety of techniques and resources, this strategy aims to comprehend users, their work, and their demands.

  According to the **Efficiency principle:**

  You should always work as fast as you can subject to constraints posed by the need for rigor.

  The crucial Data needs of the lifecycle activities required to To Evaluate UX lifecycle activity are :

  - **Usage research data elicitation**
  - **Usage research data analysis**
  - **Data modeling**



To confirm and improve designs in light of the user experience they may provide; To gather assessment information; To pinpoint important instances and design causes; Examine assessment information. Report the findings of the evaluation.

• Collect evaluation data
    - Identify critical incidents cause by design
• Analyze evaluation data
• Report evaluation results

Qualitative data collection :

- The application of techniques such as **observation and abstraction** to **capture the essence of things**.
- It also involves a set of **elicitation procedures** for qualitative data

Data, idea organization :

- **Sorting data** by categories to make **raw data understandable**.
- **Identifying themes** and **relationships** to understand the overall corpus.

Rigorous data collection and
Maintenance :

Completeness of data gathering (covering every step) Applies to data collecting for usage study and UX evaluation

Data purity – As true and accurate to the source data as feasible No erroneous notes (such as thoughts or estimates) that weren't contributed by users

- **Explain the elements which strive to optimize effectiveness.**

    The elements which strive to optimize the effectiveness :

    According to the **Efficiency principle:**

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- **Brainstroming**

    By visualising the entire user experience, user flows allow UX engineers to identify key areas and maximise the overall **effectiveness** of the design.

- **Immersion**
  A **form of deep thought and analysis of a problem** at hand and working on the overall roadmap beforehand to **maximise effectiveness**

- **Iterative Design Process**:

  Rapid prototyping and iterative **design cycles** maximise efficiency in optimising the design to satisfy user needs by enabling rapid iterations based on user feedback.

- **Data elicitation sub-activity**
  Detailed understanding: Through individual interviews, UX engineers can acquire an extensive understanding of customer requirements, preferences, and challenges.

  Understand **Needs lifecycle activity**
  • All about **gathering raw usage research data**
  • Learning about **existing work and work practice**
  Rich Insights: **Obtaining qualitative data** makes it possible to find hidden insights that might not be seen using other techniques.

  Brief and **Targeted Questioning**: By keeping the interview process focused, the user and the UX engineer can save time by designing simple and targeted questions.

  Remember goal
  “In what ways might you want to use the features of the proposed new product/system?”

- **Usability Testing:**

  Finding **Pain Points**: In order to make sure that certain pain points in the user journey are addressed in the design, usability testing assists in identifying them.

  User input: During testing, real-time user input offers insightful information about how consumers engage with the product.

  Prototype Testing: By allowing for early feedback during testing, prototypes may help save time and money that would otherwise be needed to refine a fully built product.
  Creating **user flows** helps in visualising the complete user experience, which enables UX engineers to pinpoint crucial points and maximise the design's overall effectiveness.

- **Coordination with Stakeholders**: Consistent communication and cooperation with stakeholders, such as developers and product managers, enhances the overall efficacy of the design and development process by fostering a common understanding of user demands.

  UX engineers can effectively address user needs in the design process by using a user-centered design strategy that combines aspects like iterative design with techniques like user interviews, surveys, and usability testing.

- **And those which strive to optimize efficiency**.

  - **Agile Methodology:** The iterative process and Sprints for Efficiency Optimisation Using Agile approaches promotes iterative development and frequent cycles of feedback, which boost productivity through ongoing enhancement.
    Cross-Functional Teams: Bringing together people from the design, development, and testing departments fosters cooperation and minimises handovers, increasing total productivity.

  - **Optimisation of User Flow**:
    Through important Path Analysis, the team may optimise resource allocation by concentrating on the most influential parts by identifying and prioritising essential user flows. Reducing extra stages and simplifying user flows make products easier to use and more intuitive.

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  - **Design systems and documentation:**
    Time is saved by having clear design decisions and guidelines for present and future team members. By offering a standardised collection of UI elements and patterns, a design system's implementation guarantees consistency and increases the design process.