SYNTHESIZING TEST FINDINGS

Introduction:

- Synthesizing test findings is the process of analyzing, organizing, and interpreting data collected from usability testing and user research.
- It transforms raw data such as observations, metrics, and user feedback into meaningful insights.
- Synthesis helps designers move from what happened to why it happened and what to improve.
- It is a critical step between usability testing and design iteration.

Meaning of Synthesis in UI/UX:

- Synthesis refers to combining multiple data sources into a coherent understanding.
- It involves identifying patterns, themes, and relationships across users and tasks.
- The goal is to uncover root usability problems, not isolated incidents.
- Synthesis supports informed and evidence-based design decisions.

Importance of Synthesizing Test Findings:

- Helps avoid decisions based on individual opinions or assumptions.
- Identifies system-level usability issues rather than one-off errors.
- Ensures design improvements are user-centered and data-driven.
- Supports prioritization of issues based on impact and frequency.
- Improves communication with stakeholders and development teams.

Inputs for Synthesizing Test Findings:

- Observational notes taken during usability testing.
- Video and audio recordings of user sessions.
- Task success and failure data.
- Time-on-task measurements.
- Error rates and recovery behavior.
- User quotes, comments, and emotional reactions.
- Survey results such as SUS or satisfaction ratings.

Types of Data Used in Synthesis:

- **Qualitative Data**

    o User behavior and actions.

    o Verbal feedback and comments.

    o Emotional responses and frustration points.

- **Quantitative Data**

    o Task completion rates.

    o Error frequency.

    o Time taken to complete tasks.

    o Usability scores and ratings.

Challenges in Raw Test Data:

- Data is often unstructured and fragmented.
- Large volume of observations can be overwhelming.
- Individual user behavior may be misleading if viewed alone.
- Conflicting feedback may appear across users.
- Synthesis helps bring clarity and focus.

Step 1: Organizing the Data:

- All usability data is gathered into a **central repository.**
- Notes are organized by task, screen, or feature.
- Video timestamps and observation tags are added.
- Data is cleaned to remove duplicates and irrelevant information.

Step 2: Reviewing Individual Sessions:

- Each user session is reviewed independently.
- Key successes, failures, and confusion points are noted.
- Important user quotes are highlighted.
- Initial insights are captured without judgment.

Step 3: Identifying Patterns and Trends:

- Repeated issues across multiple users are identified.
- Similar behaviors or complaints are grouped together.
- Patterns indicate **systematic usability problems.**
- Rare issues are noted but given lower priority.

Step 4: Defining Usability Problems:

- Observations are converted into **clear problem statements.**
- Problem statements describe:
  - What the problem is?
  - Where it occurs?
  - Who is affected?
- Avoid blaming users; focus on design flaws.

Step 5: Determining Root Causes:

- Analyze why users encountered the problem
- Root causes may include:
  - Poor visual hierarchy
  - Unclear labels or icons
  - Inconsistent navigation
  - Lack of feedback or error messages
- Root cause analysis prevents superficial fixes

Step 6: Severity Rating.

- Each usability issue is assigned a severity level.
- Severity is based on:
  - Frequency of occurrence.
  - Impact on task completion.
  - Difficulty of recovery.
- Common severity levels:
  - Critical
  - Major
  - Minor

Step 7: Prioritizing Findings.

- Issues are prioritized based on severity and frequency.
- High-impact issues affecting core tasks are addressed first.
- Low-impact cosmetic issues are scheduled later.
- Prioritization helps manage time and resources effectively.

Affinity Diagramming:

- Observations are written on sticky notes or digital cards.
- Similar issues are clustered together.
- Clusters represent major usability themes.
- Helps visualize relationships between problems.
- Encourages team collaboration during synthesis.

Creating Themes and Categories:

- Clusters are labeled with **clear descriptive themes.**
- Examples include navigation issues, labeling problems, or visibility issues.
- Themes provide a structured way to discuss findings.
- Each theme represents a broader usability concern.

Synthesizing Across Users:

- Individual user issues are generalized into group-level insights.
- Ensures findings represent **the majority user experience.**
- Prevents overreaction to isolated user behavior.
- Strengthens validity of design recommendations.

Synthesizing Across Tasks:

- Issues are mapped to specific tasks or user flows.
- Helps identify which steps in a process are problematic.
- Reveals breakdowns in navigation, form filling, or decision-making.
- Supports journey-level improvements.

Observation vs Insight:

- **Observation**
  - Describes what the user did.
  - Example: User hesitated before clicking the submit button.
- **Insight**
  - Explains why it happened.
  - Example: Button label and color were not prominent.

Creating Actionable Insights:

- Insights must clearly suggest **what can be improved.**
- They should be understandable to designers and developers.
- Good insights connect user behavior to design changes.

- Avoid vague or generic recommendations.

Documenting Test Findings:

- Findings are documented in a **usability test report.**
- Reports typically include:
  - o Overview of test goals.
  - o Key findings and themes.
  - o Severity ratings.
  - o Design recommendations.
- Documentation ensures traceability and accountability.

Visualizing Synthesized Data:

- Charts and tables summarize quantitative results.
- Affinity maps show qualitative relationships.
- Screenshots highlight problematic UI elements.
- Visuals help stakeholders quickly grasp key issues.

Communicating Findings to Stakeholders:

- Findings are presented to designers, developers, and managers.
- Clear language is used instead of technical jargon.
- Evidence such as user quotes and metrics supports claims.
- Effective communication ensures findings are acted upon.

Role of Synthesis in Iterative Design:

- Synthesis informs redesign and refinement decisions.
- Changes are implemented based on prioritized findings.
- Retesting validates whether issues are resolved.
- Supports continuous improvement of user experience.

Example of Synthesizing Test Findings:

- Multiple users fail to locate the "Save" button.
- Observations show users scanning the screen repeatedly.
- Insight: Button placement and color lack visibility.
- Recommendation: Move button to a prominent location and increase contrast.

Advantages of Synthesizing Test Findings:

- Improves design accuracy and effectiveness.
- Saves development time and cost.
- Encourages team alignment.
- Leads to better user satisfaction.
- Supports data-driven decision making.

Limitations of Synthesis:

- Requires careful interpretation and experience.
- Bias can influence conclusions if not managed properly.
- Poor documentation can reduce clarity.
- Needs collaboration and time investment.