




Asking the Right Questions During a Site Visit Interview

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How should we approach users?

- Master/Apprentice model
- Anthropological model
- Detective model


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What is a site visit?

- Method for gathering usability data about users, tasks, and environment
- Asking questions of users and watching them work/live in their workplace/homes


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Why conduct a site visit?

- Reveal all of the real users
- Identify tasks that users perform
- Discover questions that users ask
- Investigate known or suspected problems
- Reveal true structure and flow of work
- Set benchmarks for measuring usability


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Brainstorm a List of Questions

- What do you really need to know to design a better product (confirm critical design assumptions)?
- Are there any facts about users or tasks that are in dispute?
- What aspects of your product design are dependent on the user's environment?

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Group and Prioritize Questions

- Groups make it easier for you to jump around during an interview
- Small groups may indicate that you need to do some additional brainstorming
- You may not be able to answer all of your questions, so highlight the most critical ones

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Determine Task Scenarios

- Figure out what you need to see to answer your questions
- Task scenarios can be real or staged
- Tasks will reveal new paths to explore during the interview—there are always surprises

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Start Off With a Simple Survey

- Surveys help get the information flow started
 - Provides an effective way to gather background information quickly
 - Allows you to compare responses from multiple users
- Keep surveys brief and simple

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Allow Users To Tell Their Own Story

- Ask open-ended questions
 - Why do you think X happened?
 - What happens when you do X?
 - What just happened?
- Give the user time to respond
- Use your voice and body language to encourage them to talk
- Listen more than you talk

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Help Them Stay on Track

- Summarize what they said to clarify and encourage them to continue
 - So first you do this and then what?
 - You said you expected to see X, why is that?
- Redirect lengthy, unrelated discussions
 - I'm sorry to interrupt you, but we have about X minutes left and I have about X questions to ask. Do you mind if we move on to the next question?

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Request Specific Examples

- Get users to be specific by asking them to provide examples or war stories
 - What is an example of the impact of X?
 - Can you tell me about another time that X happened? How was it similar/different?

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Discuss Typical Problems

- Ask them about typical problems
 - Do you ever have any problems doing X?
 - What would you do if X happened?
 - Where do you go if you have questions?
 - If you could change one thing about the current way you do it, what would it be?

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Base Discussions on Artifacts

- Use end results to prompt the users to explain how they were created
 - Who created X?
 - What would you do with X?
 - How would you go about creating X?
- Keeps the users focused on tasks
- Works even if they cannot re-create the artifact for you while you watch

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Pay Attention to Non-Verbal Cues

- Watch for non-verbal behavior and listen to the tone of voice for clues
- Listen for subtle criticisms and suggestions
- Remember that some users try to please the observer by providing what they think the observer wants to see and hear
- Don't forget that you send non-verbal cues too

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Remain Flexible

- Each interview will set its own direction
 - You may not be able to ask all of your questions
 - You may ask many questions not on your list
- Follow the most promising trail rather than stick rigidly to a list of questions

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Get Them to Think Aloud

- Ask users to think-aloud as they work
 - Can you tell me what you're trying to do?
 - Could you tell me what you're thinking?
 - What are you feeling right now?
- Listen and watch
- Don't become the trainer/expert
- Remain neutral to comments

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Identify Tasks and Workflow

- Keep track of tasks performed
 - Frequency
 - Importance
 - Variations
 - Difficulty
- Note relationship of tasks to each other
- Determine the overall workflow
- Look for interruptions to the user's flow

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Record Your Source Data

- Use predefined data collection sheets
- Helps to have a note-taker/observer and an interviewer
- Can use video or audio recording
- Separate facts and problems from your own opinions, ideas, or solutions

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Collect Artifacts

- Keep an eye out for homemade job aids or other cheat sheets for using the tool
- Ask for copies of their input and output such as planning worksheets or reports
- Look for environmental impacts on their work and take pictures

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Tie Up Loose Ends

- Make sure to tie up loose ends before you leave the site
- Ask for opinions and suggestions at the end of the visit
 - If you could change any aspect of this product, what would you change?
- Ask “Is there anything I forgot to ask?”

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End With a Post-Interview Survey

- Measure satisfaction, ease of use, interest at the end of the interview using a survey
- Surveys can be completed orally or in print

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Conclusion

- The real benefit of usability testing is not the result of an individual test but the on-going collection of knowledge about users
- Exposure to users makes us better designers
- Participating in site visits helps us learn to ask the right questions

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Recommended Books

- *User and Task Analysis for Interface Design*. JoAnn T. Hackos and Janice C. Redish. John Wiley and Sons, 1998.
- *Contextual Design: Defining Customer-Centered Systems*. Hugh Beyer and Karen Holtzblatt. Morgan Kaufmann Publishers, 1998.

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Possible Questions for a Site Visit

Following are some possible questions to ask during a site visit to see how the user changes the air filter in our company's lawnmower. Remember that you may discover new questions to ask during the interview.

Mower

- What kind of mower do you have? *
- How long have you had it?
- Where did you buy it?
- What do you think of the mower overall?
- Do you have an annual maintenance inspection of the mower? If so, when? *
- Where do you have the mower serviced?
- If you could change one thing about the way you change the air filter, what would it be?

Users

- Who usually cuts the grass in your family?
- Who else cuts the grass?
- Do you change the air filter? Who else changes it? *
- How did you learn to change the air filter? *

Deciding When to Replace the Air Filter

- How do you know when to change the air filter (symptoms)? *
- How often do you change the air filter? *
- Do you know how often the filter should be replaced for this particular mower?

Finding a Replacement Filter

- How do you know which filter to get to replace the current one? *
- Where do you usually purchase air filters for your mower? *
- Do you think you would order a replacement air filter from the Web? *
- What do you think might happen if you used the wrong replacement filter?

Replacing the Filter

- Have you had any problems changing the air filter?
- How would you rate the difficulty of changing the air filter with 1 being very easy and 10 being very hard?
- Could you show me how you replace the filter and provide a commentary on what you're doing and why while you do it? *
- How do you know if you replaced the filter correctly? *

Instructions

- If you had a question about changing the air filter, where would you go to answer it?
- Have you read the owner's manual that came with the lawn mower? Why? *
- Where is the owner's manual? *

* Designates high priority question.

Questionnaire

Name: _____

1. What is the brand and model of your lawn mower?

Brand: _____ Model: _____

2. Are you the primary person who uses the mower?

(Please circle one) yes no

3. Who else uses your lawn mower?

4. Have you ever changed the air filter in your lawn mower?

(Please circle one) yes no

5. How thoroughly would you say you read your instruction manual before you used the lawn mower (Please circle one)?

not at all skimmed it read some parts read most of it read it all

6. Do you take your lawn mower to a service/repair shop for an annual tune up?

(Please circle one) yes no

7. If you do take your mower for a tune up, how often do you do this (Skip this question if you answered “no” to question #7.)?

twice a year once a year when it has problems other _____

8. How often do you change your air filter?

twice a year once a year when it has problems other _____

9. Where would you go to purchase a replacement air filter?

10. Would you consider using the web to purchase a replacement air filter?

(Please circle one) yes no

Observation Log

Participant's Name: _____

Date: _____

Location: _____

Task: Remove old air filter	Observer Comments (Problems/Solutions)
<p>Time Started Task: _____ Time Ended Task: _____</p> <p>Used instructions: YES/NO</p> <p>User Comments:</p>	
<p>Task: Obtain new air filter</p> <p>Time Started Task: _____ Time Ended Task: _____</p> <p>Used instructions: YES/NO</p> <p>User Comments:</p>	
<p>Task: Install new air filter</p> <p>Time Started Task: _____ Time Ended Task: _____</p> <p>Used instructions: YES/NO</p> <p>User Comments:</p>	

Additional Questions/Areas to Investigate:

Transcript from Lawnmower Site Visit

Following is a transcript from one site visit where a user was observed and interviewed while changing the air filter on her lawnmower. The purpose of the site visit was to gather information about how to improve the design of the mower, especially to evaluate the ease of use for replacing the air filters as well as to determine to what extent users relied on the documentation (instructions on the product and in the printed manual).

[Interviewer] **Thank you for meeting with us today. We appreciate your assistance in our design of the lawnmower and the instruction manuals that go with it. What we're going to do today is ask you about changing the filter on your lawnmower and ask you to do that. We wanted to point out to you up front that we're not really testing you or your ability to change the air filter—we're just testing the lawn mower to see how easy or how difficult it is to use. So there's nothing you can do that's right or wrong—you're providing us with information.**

[Interviewer] **To start out I wanted to give you a video release form that gives us permission to use this video again. Here's the form. [hands user form on clipboard] If you would read through that and if you agree with it sign it which gives us permission to use the video to show it to other people.**

[Interviewer] **We appreciate you signing the video release form. We also have a brief questionnaire to ask you a couple of simple questions before we get started to make sure we know some common things about the people who use our lawnmowers. If you would take a few minutes to complete this questionnaire we would appreciate it.**

[User] I don't know what brand of mower my lawn mower is.

[Interviewer] **Do you know where you would go to get that information?**

[User] I could pull it out

[Interviewer] **Great. Let's do that.**

[User] Okay. [walks into garage to retrieve mower]

[User] Scott's Intake N210

[Interviewer] **I noticed on your survey that you said you were the primary user of the lawnmower but that your son and husband also use it. Has either of them ever changed the air filter before?**

[User] No

[Interviewer] **Do you think they would know how to do that?**

[User] My husband would but my son wouldn't.

[Interviewer] **Ok, great. And also in here it says that you did not read the instruction manual before you used the mower, which is fine.**

[User] I have no idea where it is. [laughs]

[Interviewer] **You don't know where it is? Why did you not read it when you got the mower?**

[User] Because I guess when we got it my husband started mowing and then I kind of took over and so by that time if I had any questions I could ask him?

[Interviewer] **How did you learn to change the air filter in your mower?**

[User] It wouldn't start one day so I had my husband was looking at it and I saw him pull it out.

[Interviewer] **So you saw him remove the air filter. Did he replace the filter at that time?**

[User] I don't think so. I think he just beat it on something for a little bit to try to knock some stuff out and then put it back.

[Interviewer] **Do you know why he did that?**

[User] To try to get the lawnmower to work.

[Interviewer] **Ok, great. And also in here you said that you change the air filter once a year or when it has a problem. Which of the two do you think is the primary?**

[User] When it has problems. The lawn mower stops working and I pulling things out and see what I can do to make it work. [laughs]

[Interviewer] **What other things do you try to do when the lawnmower doesn't work?**

[User] I've learned to check the oil, and to clean out the spark plug or pull the spark plug out and see if it's all nasty.

[Interviewer] **And what kind of symptoms does the mower show when you go to check the air filter? Is it that it won't start or is it something different?**

[User] Either it won't start or it cuts off in the middle of mowing...when it has gas.

[Interviewer] **If you had problems that you weren't able to fix by changing the air filter, oil, or cleaning the spark plug where would you go?**

[User] Home Depot.

[Interviewer] **Is that where you bought the mower?**

[User] Right. That's where I bought the mower.

[Interviewer] **So you would just take it to their service department?**

[User] Right.

[Interviewer] **Great. Well, let's change the air filter. If you could just walk me through the process of changing the air filter. And as you do that if you could just talk out loud, just sort of think out loud, and let me know what you're doing and if you can even tell me why you're doing things as you go through. And if you get so into it so you forget I'll remind you and ask you what you're doing.**

[User] Okay. First I'd look to see what kind of screw driver I would need and it's just the regular one, not the Phillips kind. I'll walk in here and get it. [walks into garage to get screwdriver]

[User] And then unscrew these. [unscrews first screw on top of mower]

[User] I'm not very good at this. [loosens second screw and leaves both screws in the case; lifts the case off of the mower]

[User] Alright. Here's the air filter. And I've never seen one of these pieces of foam, I guess, wrapped around it, so I just kind of save that. [removes foam jacket] And this one...this is what I would go to Home Depot to buy. [Bangs filter on the handle of the mower.]

[Interviewer] **And how do you know if that one needs to be replaced or not?**

[User] It's usually filthy. If it looks like it's really dirty and gunked up then I usually get a new one.

[Interviewer] **So if we were going to pretend that that one needed to be replaced, what would you do next?**

[User] I would roll the lawnmower back in there [points to garage], take this [holds up old filter] to Home Depot so I can make sure I get the right size, and go get a new one.

[Interviewer] **Okay. Well, do you want to do that?**

[User] Sure.

[Interviewer] **Great. Thanks.**

[drives to Home Depot and goes to Garden/Outdoor section with filter in hand]
[looking on shelf with air filters]

[User] I'm looking up here and it doesn't look like they have it. [turns around] Okay, wait a minute. Voila. Oh, it even has one of those foam things. So I found it. [pays and drives home]

[User] Now we're back from the store and here's the old air filter and found the new one that looks just like it and it even has one of those foam things which is good because that one was really beat up. [tears open filter and drops pieces of packaging on ground]

[User] So, I take it out. I remember this says top to show me where to put it in. [removes paper from inside filter and drops on ground with packaging; removes foam jacket from inside filter and holds in hand] This says top so I know where to put it in.

[Interviewer] **Could you show me that?**

[User] This looks a lot cleaner than that nasty thing over there. [starts working with filter to put on new foam jacket]

[Interviewer] **What are you doing now?**

[User] I'm just putting this back on the way it was on that one when I took it out.

[Interviewer] **Did it give you any kind of instructions about how to do that?**

[User] I guess it might. [laughs and looks on driveway at torn up packaging] I was just basically copying what it was like before.

[User] That's the one I'm not going to use. [moves old air filter to side; picks up screwdriver and moves towards mower] This is the new air filter.

[User] I'll put this in here. [reads filter to verify top of filter; places air filter in the mower; replaces outside cover;

[User] I'll put this back on. [replaces case, picks up screw driver, and tightens the two screws]

[Interviewer] **And how will you know if you did this correctly?**

[User] The lawn mower will start. [pause] I think I did because besides the air filter being clean it looks the same way it did when I took it out. [takes a minute to tighten screws]

[User] I think it's done.

[Interviewer] **Do you want to start the mower?**

[User] I knew you were going to ask that. Yeah, let me make sure it has gas. It doesn't have gas. [fills gas tank] [priming engine] It says three times but the Home Depot guy told me five and it worked. So, let's see. [pulls cord and start mower]

[Interviewer] **Excellent. Thank you for your help. We really appreciate it. Before we go could I ask you just one more question. On the survey, we asked if you would consider purchasing a replacement air filter on the Web and you had a comment on there. Could you explain to me about that?**

[User] My husband works with computers all the time; he loves doing anything that he can do at the computer or whatever. I'm starting to get into it. It's a lot easier. You don't have to take the van out, go to the store or whatever. So he would be very likely to go to the Web and purchase another air filter or whatever. I'm getting to where I would be more comfortable with it. I would be more likely to do it now that I would have six months ago.

[Interviewer] **Great. Thank you very much for your help.**