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CS408-Human Computer Interaction

Subjective (Fresh Papers 2018)

Question#1:

What are good reasons for investing in user testing which are points out by Tognazzini? (Page#257)

Answer:

Tognazzini points out that there are five good reasons for investing in user testing:

1. Problems are fixed before the product is shipped, not after.
2. The team can concentrate on real problems, not imaginary ones.
3. Engineers code instead of debating.
4. Time to market is sharply reduced.
5. Finally, upon first release, your sales department has a rock-solid design it can sell



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Question#2:

Developing questions and planning an interview(5 guidelines). (Page#371)

Answer:

When developing interview questions, plan to keep them short, straightforward and avoid asking too many. Here are some guidelines (Robson, 1993):

- Avoid long questions because they are difficult to remember.
- Avoid compound sentences by splitting them into two separate questions. For example, instead of, "How do you like this cell phone compared with previous ones that you have owned?" Say, "How do you like this cell phone? Have you owned other cell phones? If so, "How did you like it?" This is easier for the interviewee and easier for the interviewer to record.
- Avoid using jargon and language that the interviewee may not understand but would be too embarrassed to admit.
- Avoid leading questions such as, "Why do you like this style of interaction?" It used on its own, this question assumes that the person did like it.
- Be alert to unconscious biases. Be sensitive to your own biases and strive for neutrality in your questions .

Question#3:

What Are the Limitations of Single Undo? (Page#313)

Answer:

The biggest limitation of single-level, functional undo is when the user accidentally short-circuits the capability of the undo facility to rescue him. This problem crops up when the user doesn't notice his mistake immediately. For example, assume he deletes six paragraphs of text, then deletes one word, and then decides that the six paragraphs were erroneously deleted and should be replaced. Unfortunately, performing undo now merely brings back the one word, and the six paragraphs are lost forever. The undo function has failed him by behaving literally rather than practically. Anybody can clearly see that the six paragraphs are more important than the single word, yet the program freely discarded those paragraphs in favor of the one word. The program's blindness caused it to keep a quarter and throw away a fifty-dollar bill, simply because the quarter was offered last. In some programs any click of the mouse, however innocent of function it might be, causes the single undo function to forget the last meaningful thing the user did. Although multiple undo solves these problems, it introduces some significant problems of its own.



Question#4:

What Are Contextual Needs and Requirements? (Page#204)

Answer:

Contextual needs describe relationships between sets of objects or sets of controls, as well as possible relationship between objects and controls. This can include which types of objects to display together to make sense for workflow or to meet specific persona goals, as well as how certain objects must interact with other objects and the skills and capabilities of the personas using the product.

Question#5:

Describe Some Formulas for Color Harmony? (Page#63,64)

Answer:

There are many theories for harmony. The following illustrations and descriptions present some basic formulas.

Analogous colors

Analogous colors are any three colors, which are side by side on a 12-part color wheel, such as yellow-green, yellow, and yellow-orange. Usually one of the three colors predominates.

Complementary colors

Complementary colors are any two colors, which are directly opposite each other, such as red and green and red-purple and yellow-green. In the illustration above, there are several variations of yellow-green in the leaves and several variations of red-purple in the orchid. These opposing colors create maximum contrast and maximum stability.

Natural harmony

Nature provides a perfect departure point for color harmony. In the illustration above, red yellow and green create a harmonious design, regardless of whether this combination fits into a technical formula for color harmony

Color Context

How color behaves in relation to other colors and shapes is a complex area of color theory. Compare the contrast effects of different color backgrounds for the same red square.



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Question#6:

List Three Evaluation Paradigms? (Page#258)

Answer:

- (1) “quick and dirty” evaluations
- (2) usability testing;
- (3) field studies.

Question#7:

Ali needs to be able to telephone his contacts. what he needs now? Mention functional elements. (Page#206)

Answer:

Functional elements to meet that need include:

- Voice activation (voice data associated with contact)
- Assignable quick-dial buttons
- Selecting from a list of contacts
- Selecting the name from e-mail header, appointment, or memo
- Auto-assignment of a call button in proper context (appointment coming up)

Question#8:

Role of Computer Science in Human Computer Interaction? (Page#44)

Answer:

One of the main contributions of computer science to HCI is to provide knowledge about the capabilities of technology and ideas about how this potential can be harnessed. In addition, computer scientists have been concerned about developing various kinds of techniques to support software design, development and maintenance. In particular, there has been a strong interest in automating design and development when feasible.



Question#9:

Difference Between Visual Art & Visual Design? (Page#343)

Answer:

Practitioners of visual art and practitioners of visual design share a visual medium. Each must be skilled and knowledgeable about that medium, but there the similarity ends. The goal of the artist is to produce an observable artifact that provokes an aesthetic response. Art is thus a means of self-expression on topics of emotional or intellectual concern to the artist, and sometimes, to society at large. Few constraints are imposed on the artist; and the more singular and unique the product of the artist's exertions, the more highly it is valued. Designers, on the other hand, create artifacts that meet the goals of people other than themselves. Whereas the concern of contemporary artists is primarily *expression* of ideas or emotions, visual designers, as Kevin Mullet and Darrell Sano note in their excellent *book Designing Visual Interfaces* (1995), "are concerned with finding the *representation* best suited to the communication of some specific information." Visual interface designers, moreover, are concerned with finding the representation best suited to communicating the *behavior* of the software that they are designing.

Question:10.

How many steps are involved in defining the requirements in Persona-based design? List down those steps. (Page#200)

Answer:

The following five steps comprise this process:

1. Creating problem and vision statement
2. Brainstorming
3. Identifying persona expectations
4. Constructing the context scenario
5. Identifying needs

Question:11.

As we know that Windows usually have various things associated with them that increase their usefulness. How do scroll bars contribute to enhance the usefulness of the windows?

(Page#117)

Answer:

Normally scrolling requires you to grab the scroll bar with the mouse cursor and drag it down. For large documents, it is hard to be accurate and in addition the mouse dragging is done holding a finger down which adds to hand strain. In contrast, the small scroll wheel allows comparatively intuitive and fast scrolling, simply rotating the wheel to move the page.



Question:12.

All users do mistakes while doing work on computers. In your point of view which tool allows the user to reverse one or more previous actions if he/she decides to change his/her mind in software user interface? (Page#310)

Answer:

Undo is the remarkable facility that lets us reverse a previous action. Simple and elegant, the feature is of obvious value. Human beings, on the other hand, make mistakes all the time and undo is a facility that exists for their exclusive use.

Question:13.

A software house “xyz ltd” develops a new web browser with innovative features. Now the developers of this browser want to know if users find items faster with their product. To find out these points developer wants to perform user testing. Why “xyz ltd” investing in user testing? Give at least three good reasons? (Page#257)

Answer:

1. Problems are fixed before the product is shipped, not after.
2. The team can concentrate on real problems, not imaginary ones.
3. Engineers code instead of debating.

Question:14.

You have to design persona based design solutions in a company “ABC”. According to your experience which step in requirement definition serves as primary purpose of eliminating as much designer bias as possible before launching into scenarios, preparing the designers to take on the roles of the primary personas during the scenario process?

(Page#201)

Answer:

Brainstorming performed at this earlier stage of Requirements Definition assumes a somewhat ironic purpose. As designers, you may have been researching and modeling users and the domain for days or even weeks. It is almost impossible that you have not had design ideas percolating in your head. Thus, the reason we are brainstorming at this point in the process is to get these ideas out of our heads so we can “let them go” at least for the time being. This serves a primary purpose of eliminating as much designer bias as possible before launching into scenarios, preparing the designers to take on the roles of the primary personas during the scenario process.



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Question:15.

You are a professional interviewer working as a research officer in IT based company. Use your intuition to answer whether conducting structured interview is different from semi-structured interview?

[Click Here for Detail.](#)

Answer:

Structured interviews keep the order and phrasing of the questions consistent across interviews to ensure consistency in the data being collected.

In contrast, semi-structured interviews may prescribe a combination of questions and more general topics to cover. Questions in semi-structured interviews are more open-ended to allow interviewers to follow issues that diverge from the guide. Because of the open-ended responses, interviewers will often tape-record semi-structured interviews.

structured interviews make it easier to code the data for analysis. Semi-structured interviews reveal more open-ended qualitative data that require more time to analyze because the interviewer must read through notes and listen to transcripts, noting and summarizing important points and patterns.

Question:16.

- Suppose you are a system analyst. With your work experience briefly describe when it is useful to observe in context to observation process? (Page#361)

Answer:

Observing is useful at any time during product development. Early in design, observation helps designers understand users' needs. Other types of observation are done later to examine whether the developing prototype meets users' needs.

Depending on the type of study, evaluators may be onlookers, participant observers, or ethnographers. The degree of immersion that evaluators adopt varies across a broad outsider-insider spectrum. Where a particular study falls along this spectrum depends on its goal and on the practical and ethical issues that constrain and shape it.

Question:17.

Imagine you are an interface designer in well-known software house. While designing an interface what are the four important points that you take care keenly with respect to alignment of visual elements? (Page#349)

Answer:

In particular, designers should take care to

- **Align labels.** Labels for controls stacked vertically should be aligned with each other; left justification is easier for users to scan than right justification, although the latter may look visually cleaner — if the input forms are the same size. (Otherwise, you get a Christmas



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tree, ragged-edge effect on the left and right.)

- **Align within a set of controls.** A related group of check boxes, radio buttons, or text, fields should be aligned according to a regular grid.
- **Align across controls.** Aligned controls (as described previously) that are grouped together with other aligned controls should all follow the same grid.
- **Follow a regular grid structure** for larger-scale element groups, panes, and screens, as well as for smaller grouping of controls.

Question:17.

Impact Of HCI in the fields of Education, Medical & Industrial Fields.

Answer:

Computer technology has had a deep impact on the education sector. Thanks to computers, imparting education has become easier and much more interesting than before. Owing to memory capacities of computers, large chunks of data can be stored in them. They enable quick processing of data with very less or no chances of errors in processing. Networked computers aid quick communication and enable web access. Storing documents on computers in the form of soft copies instead of hard ones, helps save paper. The advantages of computers in education primarily include:

1. Storage of information
2. Quick data processing
3. Audio-visual aids in teaching
4. Better presentation of information
5. Access to the Internet
6. Quick communication between students, teachers and parents

Computers play a key role in the medical field. Their uses include storing patient related data, housing knowledge bases, providing the logic and circuitry for medical equipment, scanning and imaging the body, and facilitating speedy communications.

Businesses today have a wide range of uses for computers. This has been a necessity for industry to utilize their resources more efficiently, as well in the direction of reach a larger group of potential customers. As a result, IT jobs have been flourishing for some time due to industry's reliance on computers for their daily operations.