

Lesson 3 Notes

Lesson 3 Intro

Welcome to Lesson 3. You've now learned four basic fundamental concepts. Affordances, signifiers, conceptual models, and system image. In this lesson, we're going to learn two more principles, based on the. How do I know what I can do? And the gulf of evaluation. How do I know what happened? This leads to two concepts. Discoverability and feedback. Then we're going to take all six of these concepts, and put them together. So in the very last project of this lesson. You're going to actually build something. Something useful. Incorporating all that you've learned in the course.



Lesson 03

- ⇒ Gulf of execution
 - Discoverability
- ⇒ Gulf of evaluation
 - Feedback

Crossing the Gulfs

DON: Let me show you something with my car. You know how sometimes you walk up to the trunk and your hands are full, well here's how you do it.

IRENE AU: That's really cool.



D: want to try?

IA: Can I try? So were you kicking something?

D: How do you think it works?

IA: Is there a particular place?

D: Mm. So what do you think is going on?

IA: Oh, oh, there it goes.

D: So what did you do?

IA: I'm not sure what I did.

D: You think you could do it again?

IA: Well, I don't know. Let's see.

D: Yeah. So what's-

IA: I don't know what I did.

D: So what's your conceptual model of what's going on?

IA: Maybe there's a sensor there...

D: Somewhere.

IA: Yeah, somewhere under there. It looks like.

D: You know, this is a really good example, of a bad example of crossing the gulf of execution and the gulf of evaluation and the gulf of execution. Well I'm supposed to kick or something, but where and how? How fast, or do I kick or just wave my foot? And the gulf of execution, well I did it and nothing happened. Now what am I suppose to do? Really good example of bad design.

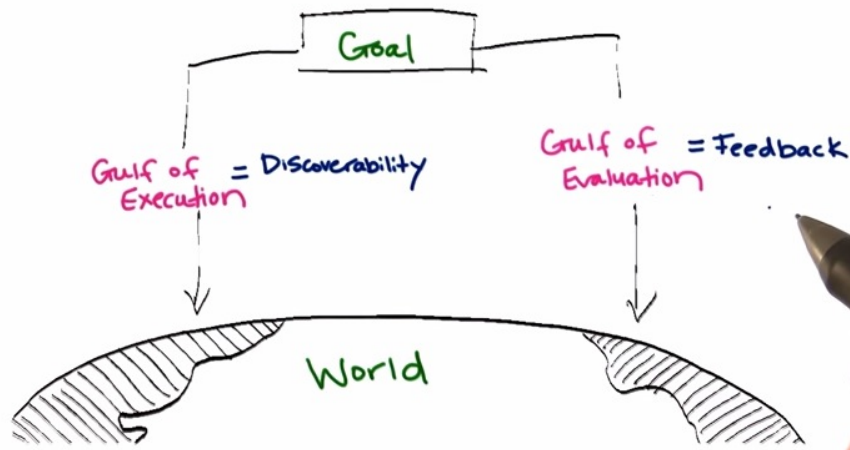


Definition The Gulfs

Two sources of difficulty, when using your product, are due to the lack of discoverability and feedback, knowing what to do, then wondering what happened. These two difficulties result from the huge gulf between a person's goal and the means of achieving them. This is called the gulf of execution. There's also the gulf between assessing the state of the world, and trying to determine if that state matches the initial goal, and this is called the gulf of evaluation. Figuring out what actions are possible, during the gulf of execution, is all about discoverability. And knowing what just happened during the gulf of evaluation is about feedback. Ever buy a new product and then

not know how to work it? Well, likely because it lacks discoverability. Ever stand at an elevator or pedestrian traffic light? Pushing the button, but not knowing if the system noticed, so you push over and over again, that's because of

The Gulfs:



lack of feedback. The role of the designer is to help people bridge the two gulfs, making the possible actions discoverable and providing feedback along the way.

Readings for the Gulfs of Execution and Evaluation

Pages 38 - 43

Discoverability

Pages too numerous to list.

Feedback

Pages 23 - 25

Feedback Example

For the first six months as a Udacity employee, I thought one of our coffee machines was broken. Because it didn't work immediately upon me pushing a specific button. What I eventually learned from a colleague, was that the coffee machine needed time to warm up prior to processing my request. This important step wasn't part of my conceptual model. Hence, the misunderstanding. The coffee

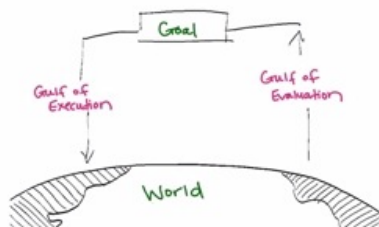


machine failed me, by not providing appropriate feedback. It should have let me know that it had received my request and was taking time to warm up. We'll cover the important topic of feedback more, soon.



Seven Questions to Cross the Gulfs

Crossing the gulf of execution, and the gulf of evaluation, involves users asking themselves a series of questions. For each of the seven questions, indicate whether the question occurs at the user's goal, the action done to the world, the gulf of execution, or the gulf of evaluation. What do I want to accomplish? Or what is my goal? What action can I do now? How do I do it? And after I've taken action, what just happened? What does what just happened, mean? Am I okay with what just happened? Have I accomplished my goal? It's important to note that typical behavior, is not about going through all stages in a linear fashion. We tend to weave back and forth when trying to accomplish a goal and not all of the activity in the seven stages of action is conscious. Goals tend to be conscious, but even they may be subconscious. The seven stages of action that are made up of the Gulfs of Execution and Evaluation. This provides a helpful checklist for designers to use when creating something. Next, Don introduces important design rules, that are linked to the seven stages of action.



Crossing the two gulfs involves users asking themselves a series of questions. For each of the seven questions below, indicate whether the question occurs at: the user's goal, the action done to the world, the gulf of execution, or the gulf of evaluation.

Seven Questions to Cross the Gulfs	Goal	World	Execution	Evaluation
What do I want to accomplish?				
What are my alternatives?				
What can I do now?				
How do I do it?				
What happened?				
What does it mean?				
Is this OK? Have I accomplished my goal?				

Seven Questions

Goal Question:

- What do I want to accomplish?

The Gulf of Execution is about discovery, so when crossing this gulf, users ask:

- What are my alternatives?
- What can I do now?
- How do I do it?

The Gulf of Evaluation is about feedback, so when crossing this gulf, users ask:

- What happened?
- What does it mean?
- Is this OK? Have I accomplished my goal?

None of these question applies to the World -- the questions are about the product and the person's goals for the product.

Seven Questions to Cross the Gulfs

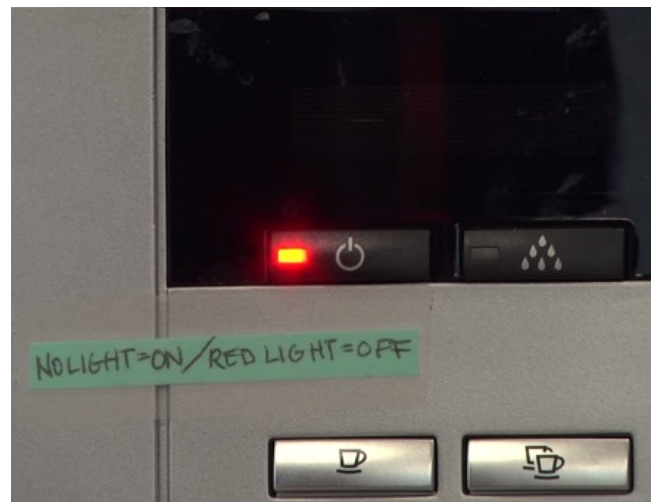
What do I want to accomplish, is the question users ask when establishing a goal. What are my alternatives, what could I do now, and how do I do it, occur at the gulf of execution when users are trying to figure out how to execute. Have I accomplished my goal, what does it mean, and what happened, are questions users ask during the gulf of evaluation, in order to determine what happened in response to an action taken. No question is asked at the world, the world is simply where the action occurred.

Reflection Gulfs of Evaluation and Execution

CHELSEY: So time for another reflection. For this reflection, I want you to go out and find an example where you got stuck crossing either the gulf of execution, or the gulf of evaluation. And you can share your example, via whatever format you'd like. So photos, video, text as long as your

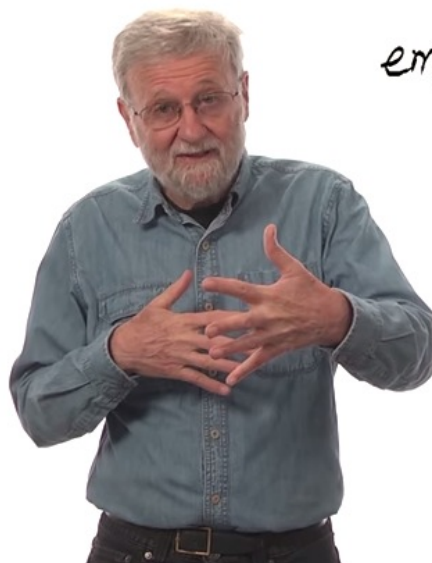
example clearly communicates where you got stuck and why.

KRISTIAN: So, here's a tip while you're going out in the world, and looking for difficult situations. Look for a place where somebody has applied, maybe a hand-made label. That gives additional instructions on how to do something. This is often how, users call for help. This wasn't designed right. I need extra help. So maybe there's a Post-it note on something, that gives some additional explanation. It might also be an official sign. So here's a few examples. This door is an emergency exit. But it actually isn't clear that it's an emergency exit. So somebody had to hand make a sign, that said don't go out this door. Or the alarm will sound. Well, then people might actually be confused. because if there was an emergency, they wouldn't know whether they can go out that door or not. And look at this coffee maker. Well for some reason, and maybe it's a cultural constraint here. Is that red means on. No sorry, I got that wrong. Red actually means off. Boy, that's confusing. So they added a handmade label here, that said. The red light when it's on, means the coffee machine is off.



Design Principles

Good designers emphasize with the people they're designing for. That's what the seven questions that you discovered with Chelsea are all about. Your

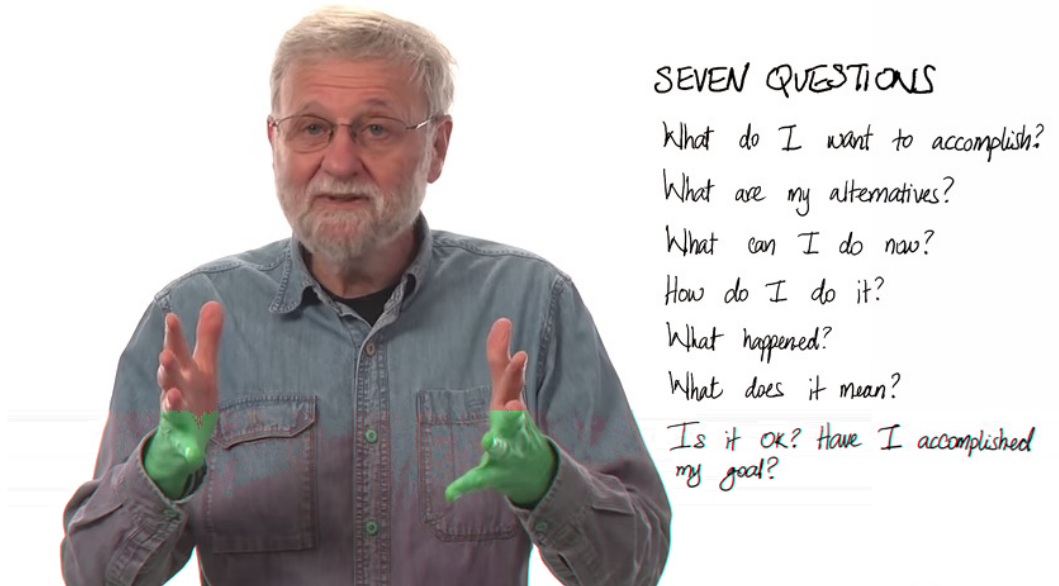


empathy

/em-pa-thē/
noun

1. the ability to understand and share the feelings of another.

job is to make sure that the people using the product, can always find the answers. Now, those seven questions complete the formal course material. One thing left, to put it all together. That's what the final project is about. It's a fun one.



SEVEN QUESTIONS

What do I want to accomplish?

What are my alternatives?

What can I do now?

How do I do it?

What happened?

What does it mean?

Is it OK? Have I accomplished my goal?

You get to put together all the things you've learned, plus the design skills from the other projects, into a real project. Something you can actually build into a real, manufactured product. Have fun!

Empathy

Definition: The ability to understand and share the feelings of another.

The Seven Questions

1. What do I want to accomplish?
2. What are my alternatives?
3. What can I do now?
4. How do I do it?
5. What happened?
6. What does it mean?
7. Is this OK? Have I accomplished my goal?

Readings on the Seven Questions

Page 71 of the revised edition of Design of Everyday Things.