



# LXD – Learner Experience Design

Creating Learner-focused  
Interfaces and Designs

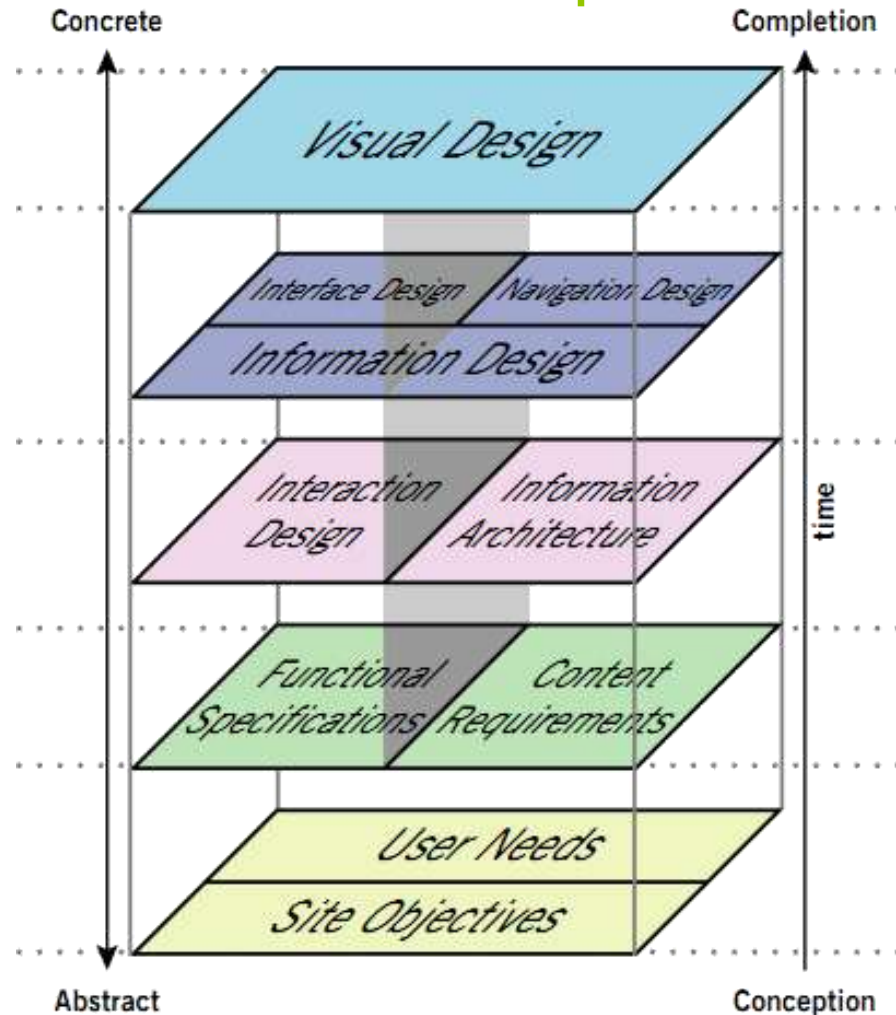
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# What's LXD?

- Learner Experience Design
- Overlap between User Experience Design (UxD) and Instructional Design
- E-Learning / Web materials focus

# Elements of User Experience

From  
Jesse  
James  
Garrett:



# Focus for today

- User focus
- Prototyping
- User Testing
  
- What do YOU want?



Question 1: How do you do  
analysis?

# Analysis Methods

- Job Shadowing / Contextual Inquiry
- Persona Development

# Job Shadowing / Contextual Inquiry

Follow them  
around:



Things  
you  
might  
learn:

1

2

4

3





# Why is Context Important?

- ◉ Matching the real world
- ◉ People leave stuff out
- ◉ Memory Prompts
- ◉ Behavioral Triggers

# Why is Context Important?

- Matching the real world



# Why is context important

- People leave stuff out



# Why is Context Important?

- Memory Prompts

**Pop Quiz:**

**Where's the best place to study for a test?**

- a) Home**
- b) Quiet Library**
- c) Windowless classroom with noisy HVAC system**
- d) Favorite Coffee Shop**

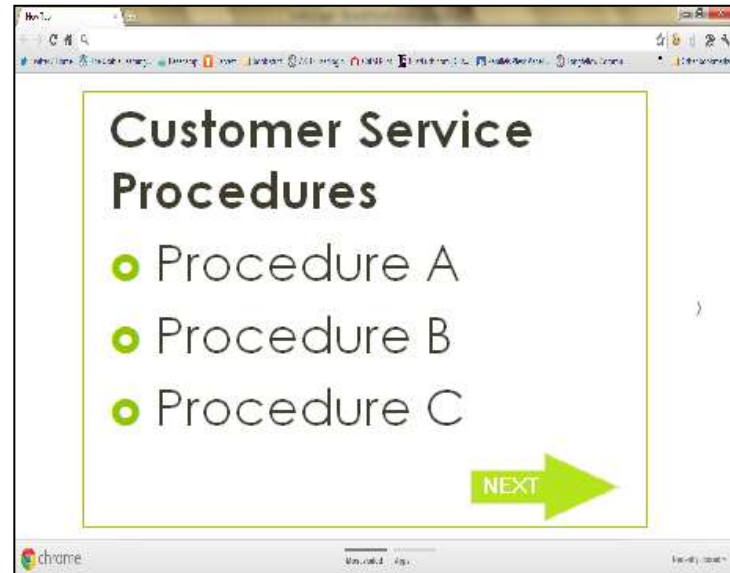
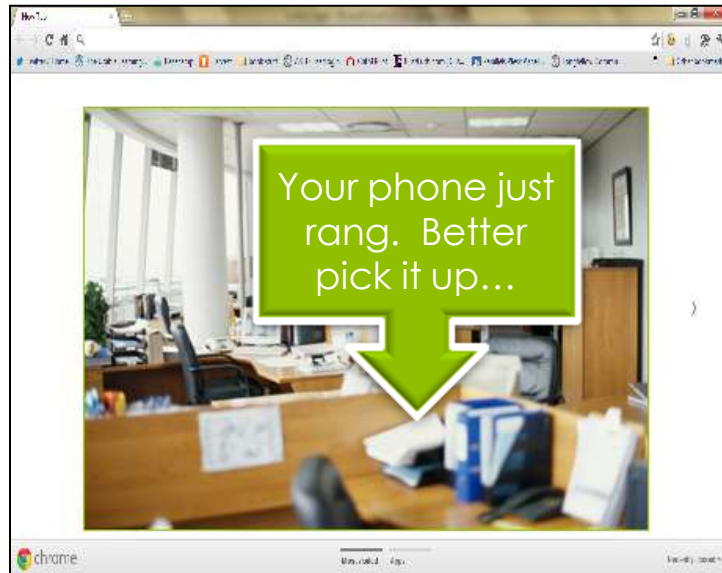


# Why is Context Important?

- Behavioral Triggers



# High vs Low Context



# Audience Analysis Results

## Audience Demographics:

- Age – 18-64
- Gender 58% Male / 42% Female
- Prior Knowledge
  - Existing procedures for Business Analysis reporting and documentation
  - General Business Analysis Knowledge
  - Basic computer literacy / skills
- Education – B.A. or above
- Experience Level – from new hire to 15 yrs

# Persona Development

Persona: Alice

Age: 32

Job Function: Business Analyst



Description: Alice has been with the company for 3 years, and started as a tester in the quality assurance department.

She spends her work time requesting and reviewing research reports, interviewing stakeholders and end users and creating software specs.

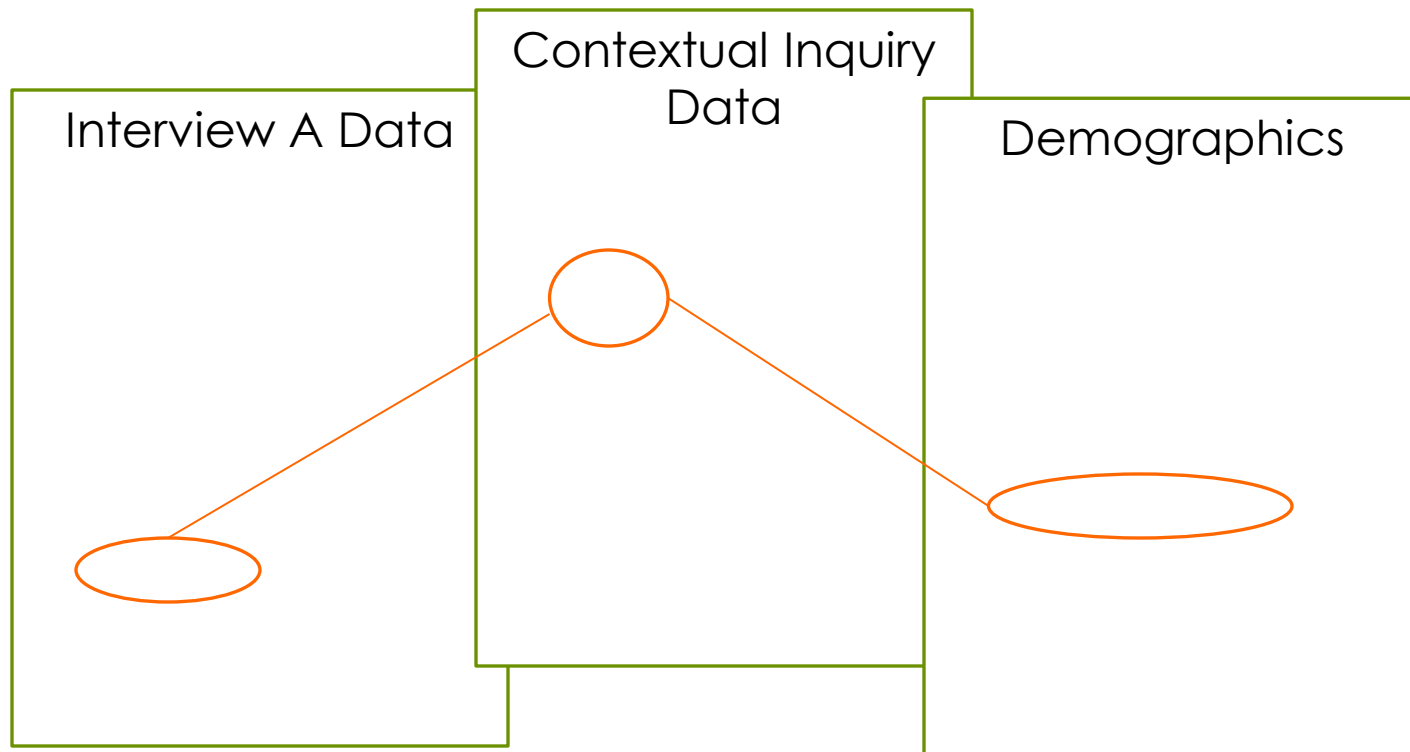
She is focused, goal-oriented within a strong leadership role. One of her concerns is maintaining quality across all output of programs.

She is connected via a T1 connection at work and cable modem at home. She also uses her smart phone extensively

She is most likely to be heard saying: "Can you be more specific?"



# How you develop personas:



How you  
DON'T  
develop  
personas:



So, the first type of user I can  
think of would be the  
“Soccer Mom” user...

# Next Step

- Prototyping!

*“Storyboarding about interactivity is like dancing about architecture.” \**

*\*blatant paraphrasing*

# Let's look at some prototype examples


Student Brainstorming Prototype

First Time	After a While	Long Term

Click on a student:

What can happen when you smoke cigarettes the first time?

Start Over

The image shows a digital interface for a student brainstorming activity. At the top, the title 'Student Brainstorming Prototype' is centered. Below it is a table with three columns: 'First Time', 'After a While', and 'Long Term'. The table body is currently empty. To the left of the table is a speech bubble containing the question 'What can happen when you smoke cigarettes the first time?'. Below the speech bubble is a blue button labeled 'Start Over'. To the right of the table, the text 'Click on a student:' is displayed above three blue icons of students with their hands raised, indicating an interactive selection feature.

# Your task

- Create a prototype for Customer Service Training

# How many people know how to hyperlink in PowerPoint?

- Find yourself a partner who knows how.
- Follow along

# Biggest Rule of All

- Test your designs

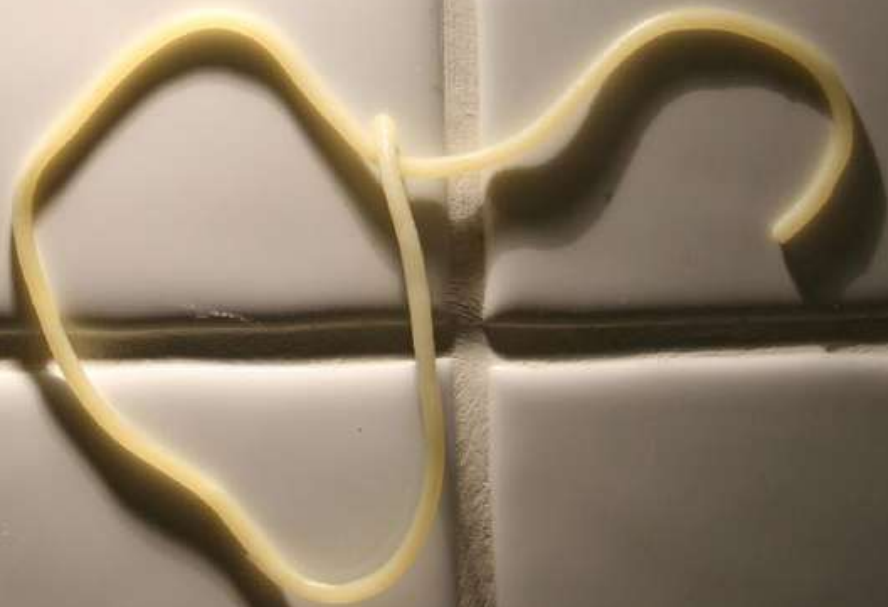
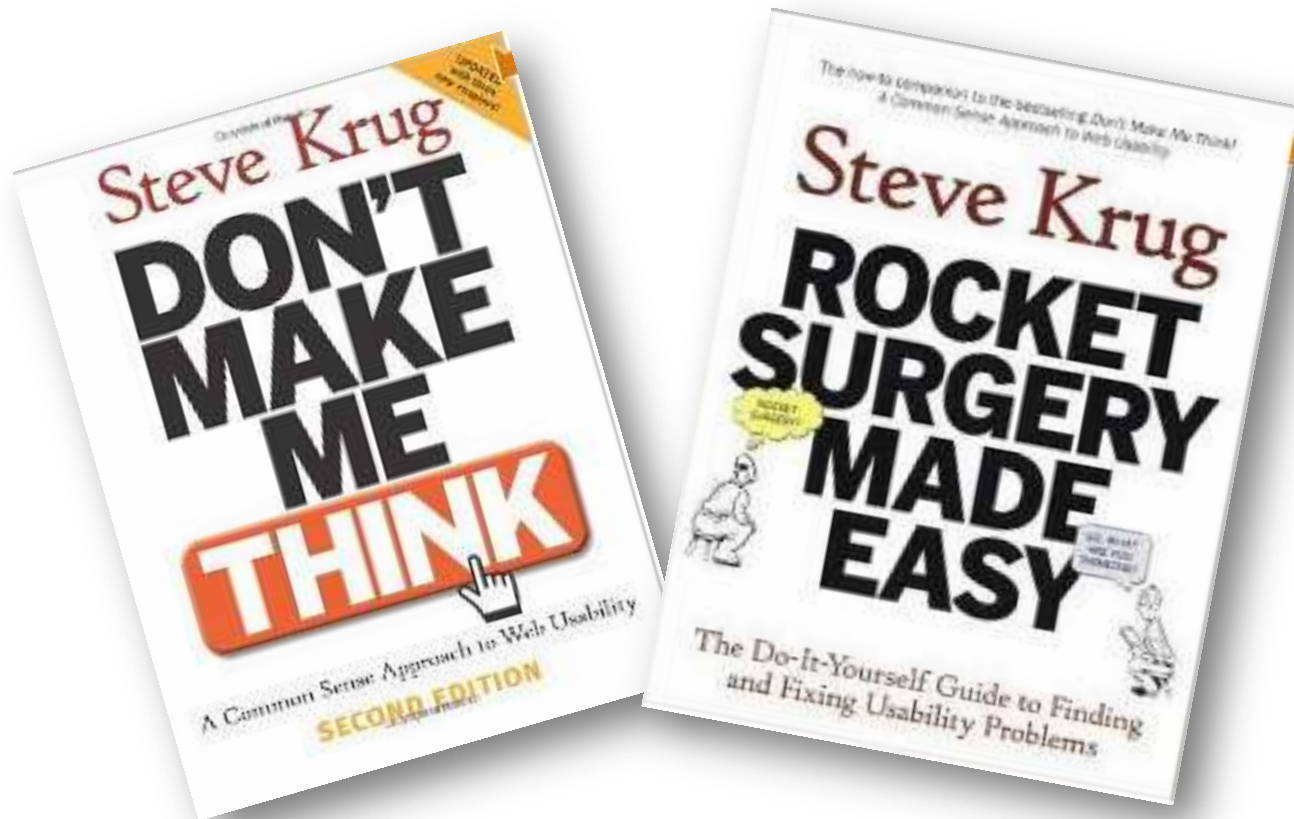


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# Who does Usability Testing?





# What Usability Testing **ISN'T**:

- UAT – User Acceptance Testing
- Focus Groups
- Demos
- Sending the link out for feedback
- Quality Assurance Testing

# Steps for User Testing

- Create a test plan

# Steps for User Testing

- Recruit users (5-6 testers / 1-1.5 hours each)

# Steps for User Testing

- Write a script
  - Let you know why you are here
  - Testing the Interface – not you
  - You can't do anything wrong
  - I probably won't help you because we want to see how people use the course when they are alone
  - Talk aloud while you go through it

# Watch them use it



- ◉ Watch in Person
- ◉ Use a lab
- ◉ Remote Testing
- ◉ User testing software (Morae)

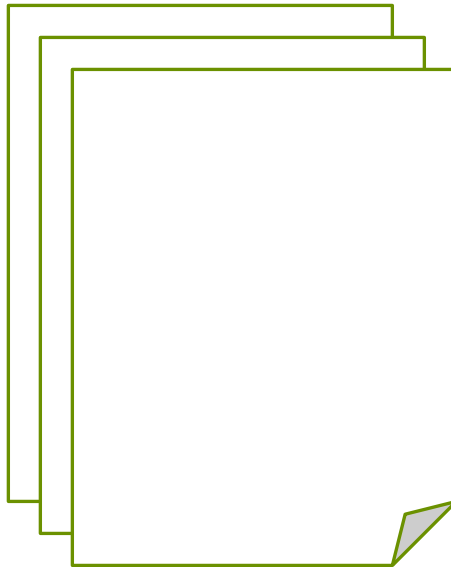
# Document the Results

- User Testing Summary Report
- Design Recommendations
- Rinse and Repeat

# Now it's your turn

- Grab a partner
- Who's the tester?
- Who's the facilitator?

Results?





# Some Guidelines

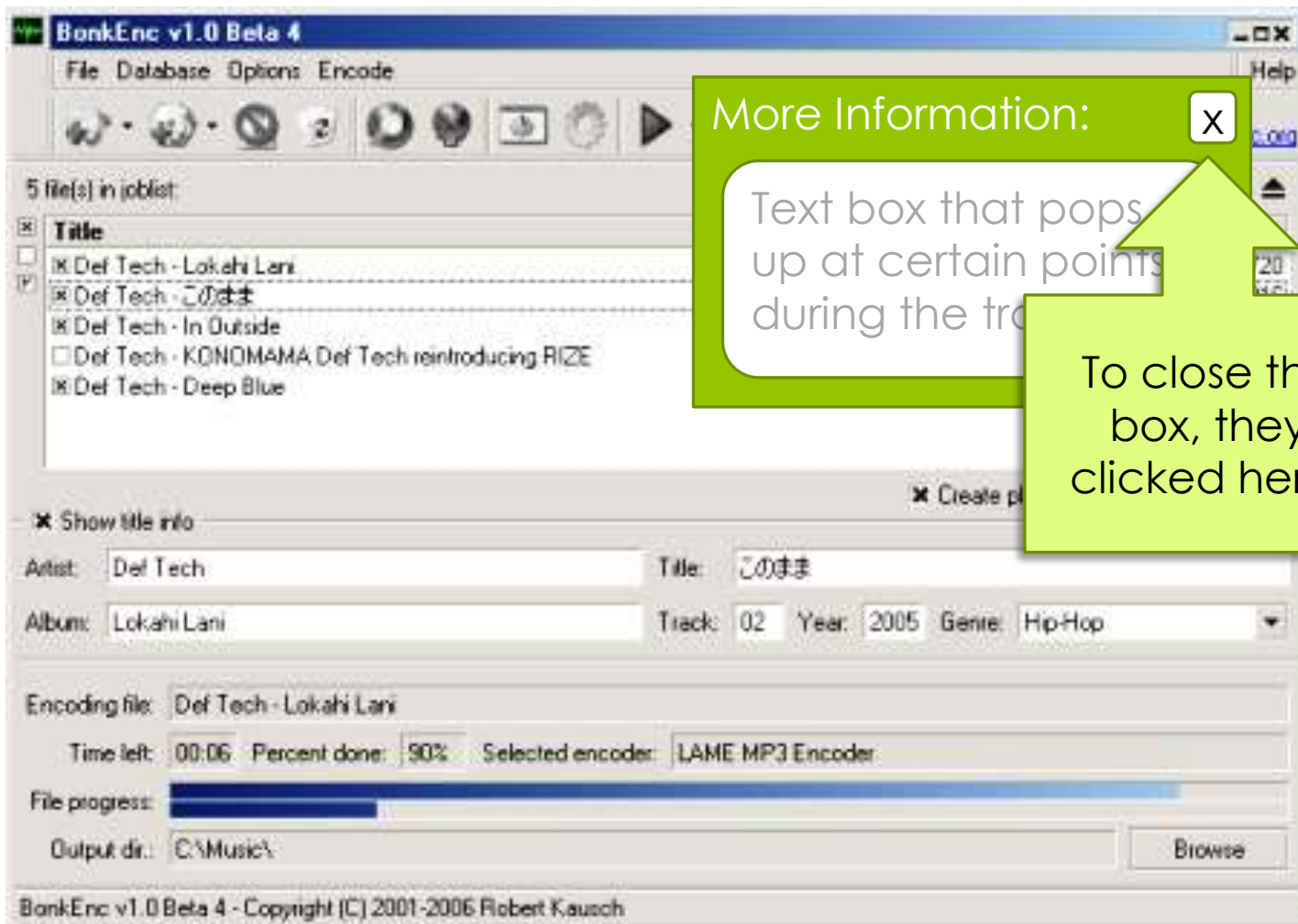
- Fitt's Law
- Grouping and Chunking
- Top Left to Lower Right
- Instructions F-shaped reading
- Five Second Usability

# Case 1: The Close Button

**Situation:** A medical device manufacturer had asked us to define a task-driven CBT for their latest I.V. Infusion device.

**The Problem:** Users were being slowed down by irritating information boxes.

# Case 1: The Close Button

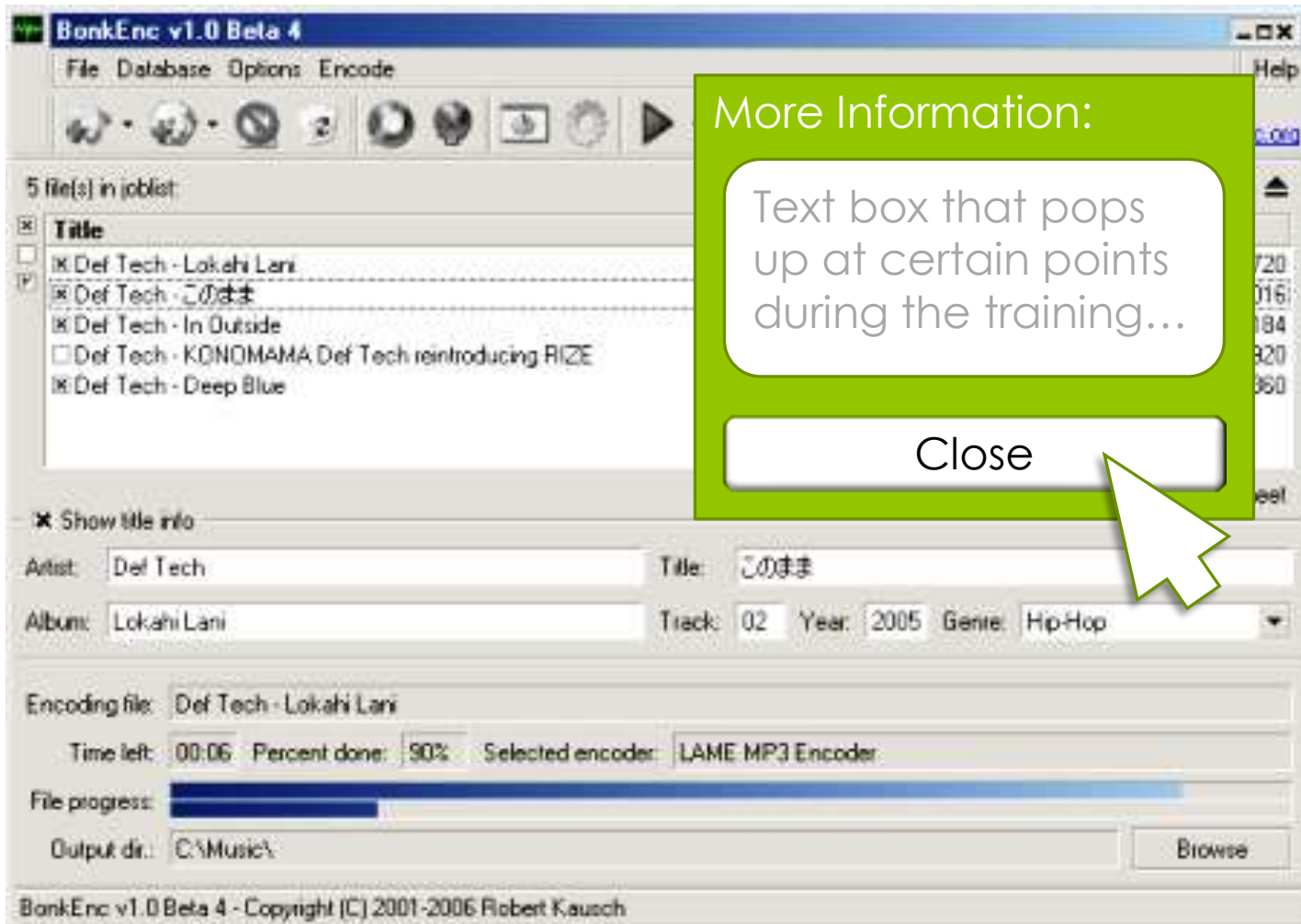


# Case 1: The Close Button

## **Fitts' Law:**

The time to acquire a target is a function of the distance to and size of the target

# Case 1: The Close Button



## Case 2: Invisible Text

**Situation:** A change management training exercise, where users were supposed to look at a selective treatment of data, information and knowledge.

**The Problem:** Users were not seeing some important explanatory text.

# Examining Your Data

When managers consider the information they need to use to make decision, they frequently have to think about the raw data, the information and the knowledge or conclusions they can glean from that information and data.



**DATA**

- The reports on customer satisfaction show 78% with product A and 39% satisfaction with product B.



- Product A has twice as many returns as product B.

- Product B's sales have gone up 12%, while product A's sales have gone down 2.3% in quarter 4.



- The advertising budget was \$126K for product A, \$67K for product B.

**INFORMATION**

- Because Product A is an established product, and product B is a new product a disparity in satisfaction levels is not unexpected.

- Product A's sales are 8 times as high as Product B's. A higher return rate is expected.

- Product B's current advertising budget is based on the pilot launch. Full launch will require a substantially higher budget.

**KNOWLEDGE**

- Product B is still not developing as quickly as hoped, but the foreign markets are still expected to work well.

- Treatment of Product A has grown complacent within the company.

The most balanced viewpoint recognizes the plusses and minuses of a situation and thereby takes action to make real change happen. The end result is a more even handed approach that considers all the information before leaping to conclusion.

**NEXT >**



Instructions



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Help





# Examining Your Data

When managers consider the information they need to use to make decisions, they frequently have to think about the raw data, the information and the knowledge or conclusions they can glean from that information and data.



## DATA

- The reports on customer satisfaction show 78% with Product A and 39% with Product B.

- Product A has twice as many sales as Product B.

- Product A's sales have gone up 10%, while Product B's sales have gone down 2.3% in quarter 4.

## INFORMATION

- Because Product A is an established product, and Product B is a new product, the reports in satisfaction are not unexpected.

- Product A's sales are 8 times as high as Product B's. A higher return rate is expected.

- Product B's current advertising budget is 10% of the total budget. The next quarter will require a substantially higher budget.

## KNOWLEDGE

- Product B is still not developing as quickly as hoped, but the foreign markets are still expected to work well.

- Treatment of Product A has grown complacent within the company.

The most effective manager recognizes the plusses and minuses of a situation and thereby takes action to make real change happen. The end result is a more even handed approach that considers all the information before leaping to conclusion.

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# Examining Your Data

When managers consider the information they need to use to make decisions, they frequently have to think about the raw data, the information and the knowledge or conclusions they can glean from that information and data.



## DATA

- The reports on customer satisfaction show 78% with product A and 39% satisfaction with product B.

- Product A has twice as many returns as product B.

- Product A's sales have gone up 10% while product B's sales have gone down 20% since last year.

- The advertising budget was 10% higher for product A, 33%.

## INFORMATION

- Because Product A is an established product, and product B is a new product a disparity in satisfaction levels is not unexpected.

- Product A's sales are 4 times as high as Product B's. A higher return rate is expected.

- Product B's current advertising budget is based on the past trends. The results will require a substantially higher budget.

## KNOWLEDGE

- Product B is still not developing as quickly as hoped, but the foreign markets are still expected to work well.

- Treatment of Product A has grown complacent within the company.

The most balanced viewpoint recognizes the plusses and minuses of a situation and thereby takes action to make real change happen. The end result is a more even handed approach that considers all the information before leaping to conclusion.

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# Examining Your Data

When managers consider the information the need to use to make decision, they frequently have to think about the raw data, the information and the knowledge or conclusions they can glean from that information and data.



Sometimes it's possible to focus too heavily on the negatives, and not spend enough time seeing a complete picture of the situation. This does not equal an accurate and balanced picture of the situation. This should be revisited.

## DATA

- This reports on customer satisfaction show 78% with product A and 38% satisfaction with product B.

- Product A has twice as many returns as product B.

- Sales of product B have gone up 12% while product A's sales have gone down 23% in quarter 4.

- The advertising budget was \$120K for product A, \$87K for product B.

## INFORMATION

- Because Product A is an established product, and product B is a new product, a disparity in satisfaction levels is not unexpected.

- Product A's sales are 8 times as high as product B's. A higher return rate is expected.

- Product B's current advertising budget is based on the pilot launch. Full launch will require a substantially higher budget.

## KNOWLEDGE

- Product B is still not performing as quickly as hoped, but the foreign markets are still expected to work well.

- Treatment of Product A has grown complacent within the company.



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# Examining Your Data

When managers consider the information the need to use to make decision, they frequently have to think about the raw data, the information and the knowledge or conclusions they can glean from that information and data.



Sometimes it's a mistake to focus heavily on the negatives, and not spend enough time seeking a complete picture of the situation. This does not equal an accurate and balanced picture of the situation. This should be revisited.

## DATA

- The survey results show 76% with product A and 68% satisfaction with product B.

- Product A sales have gone up 12% in quarter 3.

- Product B sales have gone up 10% while product A's sales have gone down 2.3% in quarter 4.

- The advertising budget was \$1.2M for product A, \$0.9M for product B.

## INFORMATION

- Because Product A is an established product, and product B is a new product, a disparity in satisfaction levels is not unexpected.

- Product A's sales are 8 times as high as product B's. A higher return rate is expected.

- Product A's current advertising budget is based on the prior year's. For quarter 4, we require a substantially higher budget.

## KNOWLEDGE

- Product B is still not developing as quickly as hoped, but the foreign markets are still expected to work well.

- Treatment of Product A has grown complacent within the company.



Instructions



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Help



Main

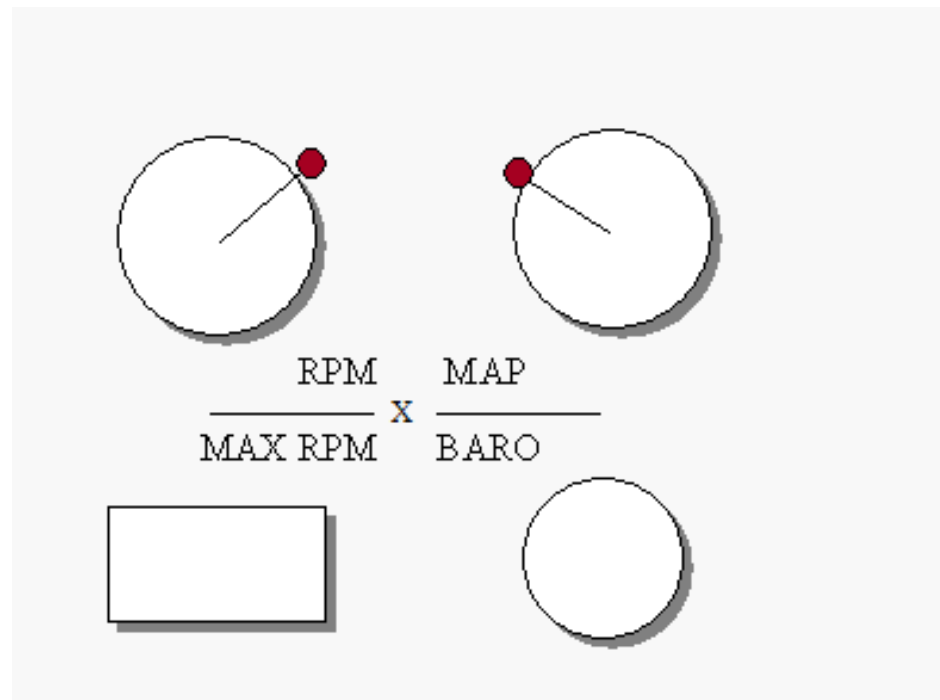
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# Case 3: Active Learning

**Situation:** A technical simulation to learn about fuel injection.

**The Problem:** Users were using, but not learning.

# Case 3: Active Learning



# Case 3: Active Learning

## Question Worksheet:

1. Label the four parts of the sequence:

\_\_\_\_\_ & \_\_\_\_\_

2. Adjust the average signal along a given pulse width (for example, 3 cycles):

↳ the RPM (Engine Speed) high or low? \_\_\_\_\_

↳ the MAP (Engine Vacuum) high or low? \_\_\_\_\_

3. Adjust the average signal when a given pulse width (for example, 3 cycles):

↳ the RPM (Engine Speed) high or low? \_\_\_\_\_

↳ the MAP (Engine Vacuum) high or low? \_\_\_\_\_

# Case 3: Active Learning

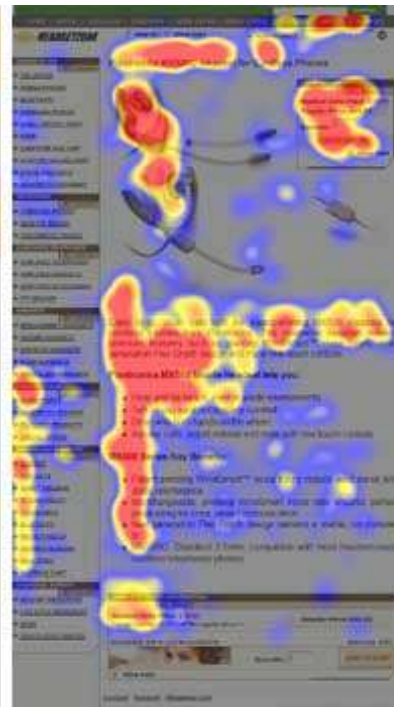
**(Very Informal) Results:**

**On a short quiz with 4 questions (8 participants):**

**User scores without worksheet- 0,0,2,4**

**User scores with worksheet- 2,4,4,4**

# F-shaped Reading Pattern





# A word about instructions:

The screenshot shows a software interface for building a sales process. At the top, a blue header bar contains the text "GAIN" and "ECOLAB" on the left, and a help icon (?) and close icon (X) on the right. Below the header, a light blue box contains instructional text: "Build the HELP sales process by dragging each step into the correct phase. Steps will not stick unless they are placed in the right phase column (highlighted) and in the right order." Below this, a speech bubble from a cartoon character says: "I'll get you started. The first step in the Hello phase of the sales process is to make a good first impression. Drag 'First Impression' into the Hello phase column now." In the center, there are ten draggable step boxes: "Ask Questions", "Handle Initial Objections", "Positive prospect experience", "Handle Objections", "Physically Review", "State Compelling Reasons", "Why/How", "Get Permission", "Close", "First Impression", "Greet", and "Get Reference". At the bottom, there are four phase columns: "Hello", "Educate", "Leverage", and "Prove". The "Hello" column is highlighted with a yellow border. At the bottom right, a blue bar displays "\$100" and a "Main Menu" button.

GAIN  
ECOLAB

Build the HELP sales process by dragging each step into the correct phase. Steps will not stick unless they are placed in the right phase column (highlighted) and in the right order.

I'll get you started. The first step in the Hello phase of the sales process is to make a good first impression. Drag "First Impression" into the Hello phase column now.

Ask Questions   Handle Objections   Why/How   First Impression  
Handle Initial Objections   Physically Review   Get Permission   Greet  
Positive prospect experience   State Compelling Reasons   Close   Get Reference

Hello   Educate   Leverage   Prove

\$100   Main Menu

Build the HELP sales process by dragging each step into the correct phase. Steps will not stick unless they are placed in the right phase column (highlighted) and in the right order.

I'll get you started. The first step in the Hello phase of the sales process is to make a good first impression. Drag "First Impression" into the Hello phase column now.



Ask Questions

Handle Objections

Why/How

First Impression

Handle Initial  
Objections

Physically Review

Get Permission

Greet

Positive prospect  
experienceState Compelling  
Reasons

Close

Get Reference

Hello

Educate

Leverage

Prove

# What are the purposes for screen instructions?

- Set up the situation / scenario / learning context
- Tell the learner what they are going to do on the screen
- Help them figure out what to do next



# What is subitizing?

**Read:**

I'll get you started. The first step in the Hello phase of the sales process is to make a good first impression. Drag "First Impression" into the Hello phase column now.



**Select  
One:**

Ask Questions

Handle Objections

Why/How

First Impression

Handle Initial  
Objections

Physically Review

Get Permission

Greet

Positive prospect  
experienceState Compelling  
Reasons

Close

Get Reference

**H**ello**E**ducate**L**everage**P**rove

Drag  
Here

**\$100**[Main Menu](#)

**Read:**

I'll get you started. The first step in the Hello phase of the sales process is to make a good first impression. Drag "First Impression" into the Hello phase column now.



**Select  
One:**

Ask Questions	Handle Objections	Why/How	First Impression
Handle Objections	Physically Review	Get Permission	Greet
Positive prospect experience	State Compelling Reasons	Close	
		Get Reference	

**H**ello**E**ducate**L**everage**P**rove

Drag  
Here

**\$100**[Main Menu](#)



# Questions?

- Thanks for coming
- Book Signing Next! – ASTD Bookstore
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  - [julie@usablelearning.com](mailto:julie@usablelearning.com)
  - <http://usablelearning.com>
  - Twitter: usablelearning

