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Introduction to Interaction Design  
SESSION TYPE : LESSON with WORKSHOP  
WBD4400

Introduction to Module

- Module Overview
- Outcomes
- Assessments

Introduction to Interaction Design

Fundamentals Consistency

-Visibility

-Learn-ability

Predictability

Documentation and Feedback

<b>1.</b>	<b>Module Code</b>	WBD4400
<b>2.</b>	<b>Module Title</b>	Interaction Design
<b>3.</b>	<b>Level</b>	4
<b>4.</b>	<b>Credit Points</b>	30
<b>5.</b>	<b>Notional Learning Hours</b>	300
<b>6.</b>	<b>Subject</b>	Web Development
<b>7.</b>	<b>Module Leader</b>	tbc
<b>8.</b>	<b>Module Restrictions</b>	
	a. Prerequisites	None
	b. Programme Restrictions	None
	c. Level Restrictions	None
	d. Other Restrictions or Requirements	None

## Programme outcomes

A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5
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## Highest level achieved by all graduates

6	6	6	6	--	--	--	6	6	6	--	--
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Module Title	Module Code by Level
Web Essentials	WBD4100
Introduction to Academic and Professional Practice	CMN4200
Front-end Development	WBD4300
Interactive Design	WBD4400

Aims During this module, students will be presented with the key aspects of Web animation. They will be able to conceive and realize sequences for different internet media (such as advertising banners, jingles) and will develop the required skills to operate complex graphic manipulation software.

Students will approach the principles of interactive design, various methodologies and applications, and interfaces. At the end of the module, students will be able to analyse and create an entire basic interactive media project.

Learning Outcomes On successful completion of this module students will be able to:

### Knowledge

- K1 Explain the most important theories of the Creative Media and their impact on the industry developments;
- K2 Define the roles and the dynamics of a modern business operating in the web development industry;
- K3 Interpret the principles of animation;

### Skills

Develop appropriate design, user interface, and graphics for a variety of web based digital platforms;

Employ the most effective techniques to develop specific animation products;

Apply the most appropriate workflow in product animation.

## **11. Syllabus**

The module is divided into two units as follows (indicative list of key subjects):

### **Unit WBD4400.1: Principles of Animation**

- Technical bases
- Storyboarding
- Time management
- Sound Management
- Import/Export

### **Unit WBD4400.2: Human-Computer Interaction**

- Design in communication
- Methodology
- Production/Implementation
- Applications
- Types of interfaces

## **12. Learning, Teaching and Assessment Strategy**

Learning activities include lectures, workshops, seminars, tutorials, presentations and independent study. Students will produce both practical and written work, and sit examinations to demonstrate that they have achieved the learning outcomes; (K1, K3, S1)

Lectures will introduce theoretical, critical/conceptual and technical issues related to the key topics of the syllabus; they will include guidance for further independent study, and open up associated issues and invite student questions and subsequent discussion; (K1, K2, S2)

Seminars and tutorials will enable students to engage critically with the module topics as well as providing opportunities to reflect on their learning and work in progress. Sessions may also include individual or group led presentations and be subject to peer review; (S1, S2)

Practical skills will be facilitated in group demonstrations and workshop sessions, and students will also engage in individual/project group practical sessions in studio, lab and workstation environments; (S1, S2, S3)

Where applicable, practical and theoretical learning activities will be organised on a team-work basis; (S1)

A substantial part of students' learning will be constructed through independent self-directed activities, scaffolded through access to lecturer/supervisor/tutor support and guided study sessions; (S1, S2, S3)

Use of a Virtual Learning Environment (VLE) and other e-learning solutions will enhance the Learning, Teaching and Assessment strategy, facilitating on campus and remote access to a variety of learning materials, through a combination of synchronous and asynchronous means; (K1, K2, K3, S1, S2, S3)

### **13. Assessment Weighting**

#### **Formative Assessment**

Students will be required to undertake a series of 1-3 formative assessment tasks linked to the summative assessment tasks. The formative assignments will provide a structured opportunity for students to receive formal feedback that will direct the learning for each summative assessment task.

#### **Summative Assessment**

Summative assessment will take the form of a range of work demonstrating that the student has met the learning outcomes of the module. The work will normally be constituted as follows:

#### **Coursework:**

**60%**

Practical assignment (S1, S2)

(60%)

Students will develop individual complete interactive media project with graphism, animation and written proposition. (3600 words or equivalent)

#### **Unseen examination:**

**40%**

Unseen examination (K1, K2, K3, S1, S2, S3)

(40%)

A written unseen exam, covering all aspects of the module.  
(Duration: 60 minutes)

### **14. Learning Materials**

NB: The materials identified here are indicative and will be reviewed and updated annually.



Essential Armstrong, H. (2009) *Graphic Design Theory: Readings from the Field*. New York: Princeton Architectural Press. Dabner, D., Stewart, S., Zempol, S (2014) *Graphic Design School: A Foundation Course for Graphic Designers Working in Print, Moving Image and Digital Media*. London: Thames & Hudson Ltd. Meyer, C., Meyer, T. (2013) *Creating Motion Graphics with After Effects: Essential and Advanced Techniques*. Oxford: Focal Press

Recommended Atwater, P.M.H. (2007) *The Big Book of Near-Death Experiences: The Ultimate Guide to the NDE and Its Aftereffects*. Faber, VA: Rainbow Ridge Publishing Christiansen, M. (2013) *Adobe After Effects CC Visual Effects and Compositing Studio Techniques*. San Jose: Adobe. Crawford, C. (2002) *The Art of Interactive Design - A Euphonious and Illuminating Guide to Building Successful Software*. San Francisco: No Starch Press Cristiano, G. (2012) *The Storyboard Artist: A Guide to Freelancing in Film, TV, and Advertising*. Studio City, CA: Michael Wiese Productions.

Drucker, J., McVarish, E. (2012) *Graphic Design History: a critical guide*. Boston: Pearson Pratt, A., Nunes, J. (2012) *Interactive Design : an introduction to the theory and application of user-centered design*. Beverly, MA: Rockport Publishers

## 15. Module Run

<b>Academic Year</b>	<b>Delivery Mode</b>
2015/16	2-year FT, 3-year FT, 4-year PT, 6-year PT
2016/17	2-year FT, 3-year FT, 4-year PT, 6-year PT
2017/18	2-year FT, 3-year FT, 4-year PT, 6-year PT
2018/19	2-year FT, 3-year FT, 4-year PT, 6-year PT
2019/20	2-year FT, 3-year FT, 4-year PT, 6-year PT
2020/21	2-year FT, 3-year FT, 4-year PT, 6-year PT

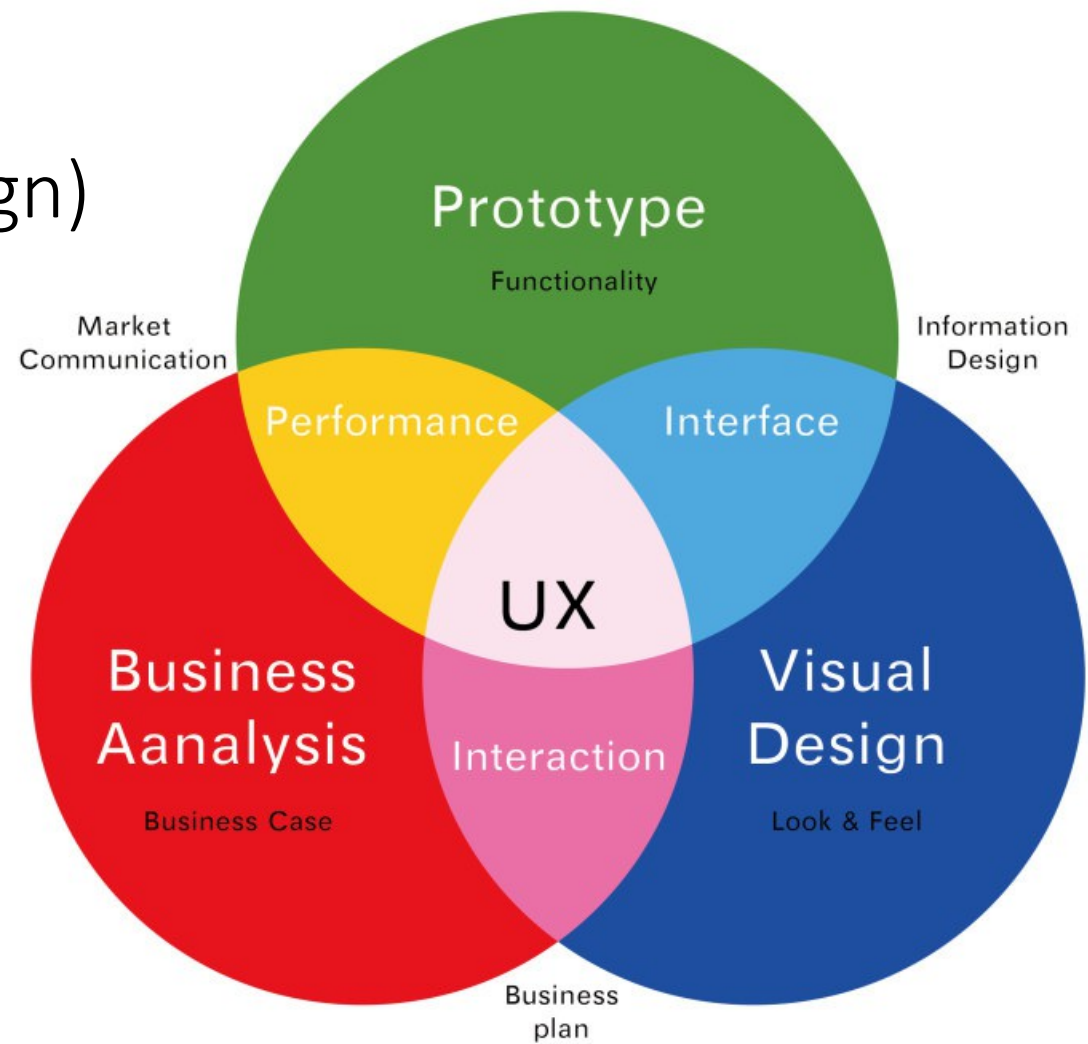
# Interaction Design

What is it?

IxD?

UX (User Experience Design)

UI (User Interface)



# Intro to Interaction Design: Overview

## Fundamentals and Consistency



"WE LIKE YOUR DESIGN, BUT FRANK HAS A SMALL CHANGE, BARB HAS A CHANGE, JOE HAS A CHANGE, I HAVE A CHANGE, JON HAS A CHANGE AND JIM HAS A CHANGE."

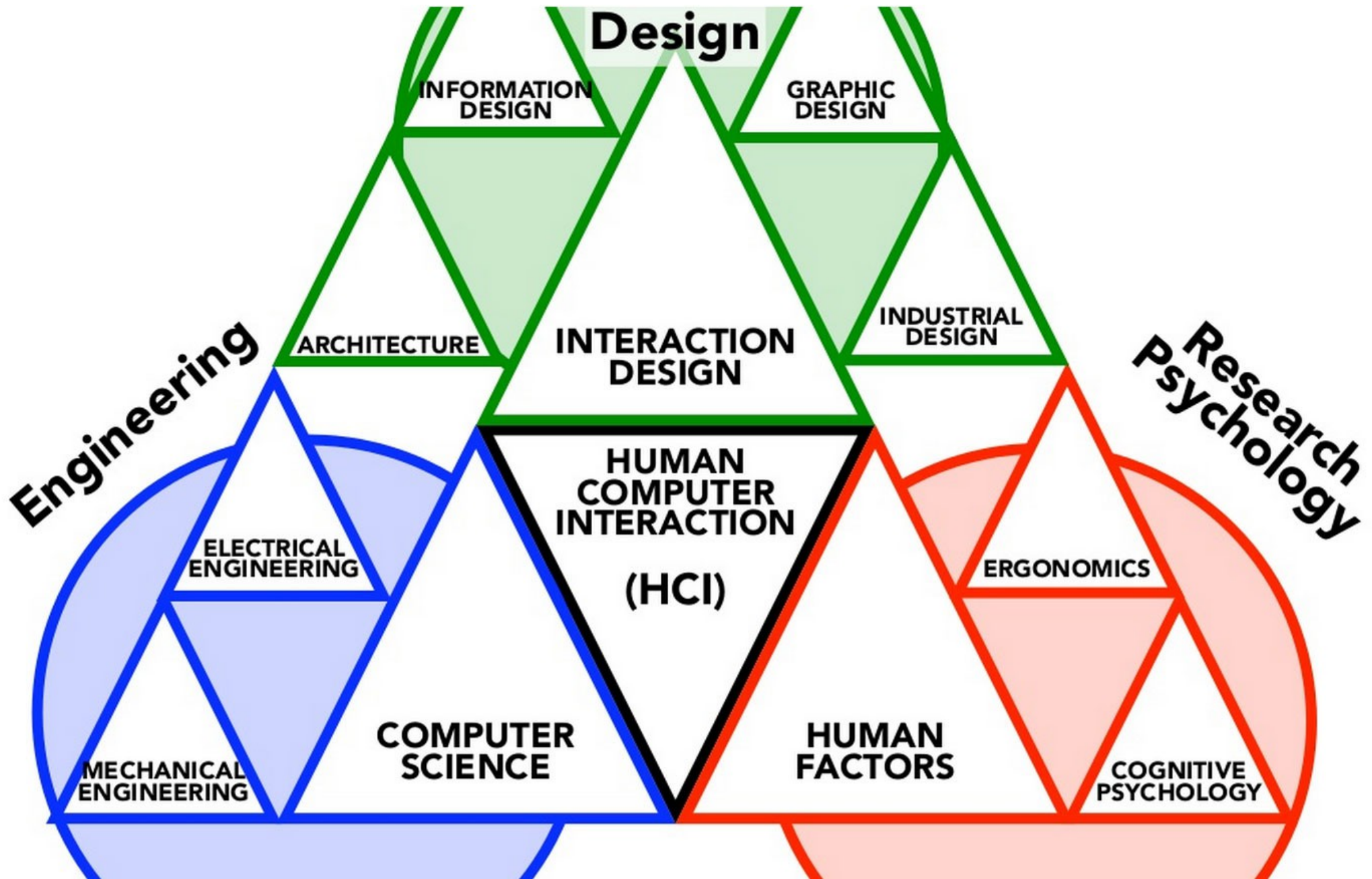
# Fundamentals / Consistency

Goal Driven Design - Goal-driven design was popularized by Alan Cooper, in his book *The Inmates Are Running the Asylum: Why High-Tech Products Drive Us Crazy and How to Restore the Sanity*, published in 1999.

## 5 Tenets of Goal Driven Design

- 1** Design first; program second.
- 2** Separate responsibility for design from responsibility for programming.
- 3** Hold designers responsible for product quality and user satisfaction.
- 4** Define one specific user for your product.
- 5** Work in teams of two.

# HCI (Human Computer Interface)



# Introduction to Interaction Design

Professionally, Interaction design can be labelled User experience Design.

My attitude towards UX when it comes to web is that SEO takes you to a search engine results page or SERP, Click Through Rate Optimisation or CTRO takes you to the website, UX will create a conversion (or the website doing its job) whether that be a sale or lead.

Design principals are used to achieve this. Design Principals are methods and techniques of design that are tried and tested to accomplish the purposes of an interaction.

# Introduction to Interaction Design

Examples of Design Principals are;

## **The Fold**

*The part of the website below the visible horizon not yet scrolled to.*

## **The Call to Action**

*Having a large Phone number or Donation Button prominently featured.*

## **Navigation**

*Intuitive and recognisable design, responsive and well understood by use of standard terminology.*

## **Stickiness**

*Keeping the user on the website, with Videos, Social Media, News Feeds and Blogs.*



Below is a website which has won awards for its functionality, it's one I based a charity website I built upon.

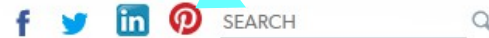
Note the large CALL TO ACTION, essential for charity websites.

Prominent navigation, search feature required for large scale websites.

Social Icons at readerly hand.

The cut-off content at the fold to trigger scrolling.

All of these principals are important and they are statistically know to increase visitor interaction and conversion rate. This is very important in order to convince a client of the value of your design.



OUR ROLE & IMPACT

BLOG

UNDERSTANDING PARKINSON'S

GET INVOLVED

FOR RESEARCHERS

# Purpose. Partnership. Progress.

Our single, urgent goal: Cure Parkinson's disease.  
We can't do it without you.

DONATE TODAY



LATEST FROM THE BLOG

MORE NEWS >

MJFF LIVE



December 05, 2017

Read the recap of this year's #foxgala and view our photo

# Value of Design Principals

Its important to plan and show the technical benefits of your proposed design to a client, which will convince this client of the viability of your design in terms of visitor numbers and return on investment for their payment towards the project.

Should all design principals be followed, research can be readily sourced to determine the average visitor numbers versus conversion rate for your sort of website, its industry and other parameters.

This data can be converted into conversion expectation and even a profit forecast.

# Case Study: Conversion Analysis, Peaceful Planet

Keyword	Monthly Search Volume (median value used)	Projected Position in Search Results	CTR Projection	Conversion Projection (2% average for Not-for-profit)
non profit organisation	10K-100K	7	2.3%	455.4
human rights abuses	10K – 100K	9	1.36%	24.48
human rights organisations uk	100 – 1K	7	2.3%	10.35
human rights activists uk	10 - 100	10	1.5%	0.675
				490.905

How Google Keywords Tool calculates Monthly Search Volume: The average number of times that people have searched for a keyword and its close variants based on the targeting settings and date range that you've selected. The average the number of searches for the term over a 12-month period.

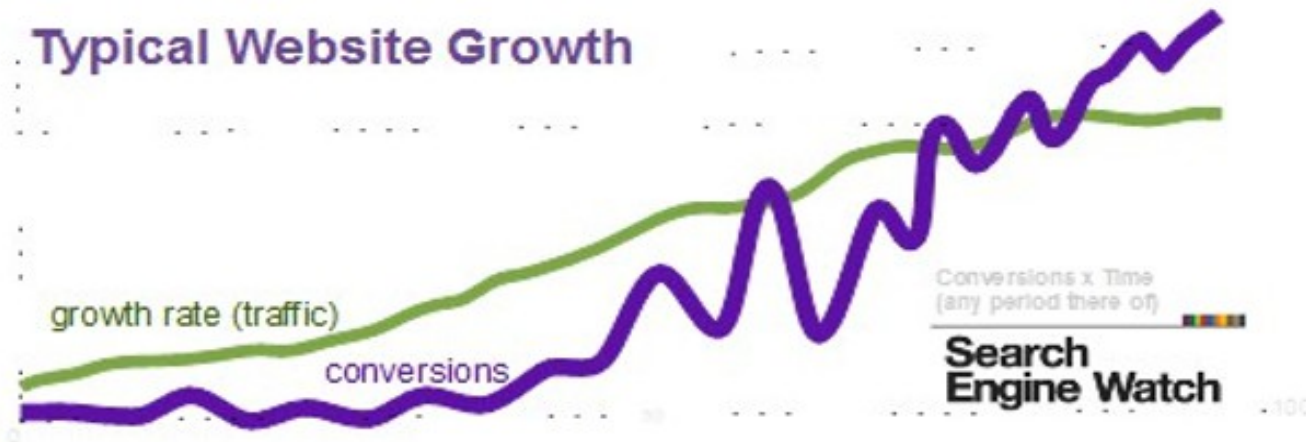


# Case Study: Conversion Analysis, Peaceful Planet II



The Conversion Rate Projection x  
Average Conversion Rate Projection is  
**£31,265.73945**  
Per month

Typical Website Growth



Using The Above Graph it is Possible to Estimate  
the Organic Growth and Conversion Over Time  
Rate and use this to estimate Turnover Growth

# Case Study: Interaction Design, Peaceful Planet

Peaceful Planet made use of an interactive donation meter. Once donations were made, a dynamic and interactive display registered the increase in funds. This really helped with user engagement as they can see how their funds have contributed to the cause. This could be expanded on by having videos run afterwards corresponding to the size or frequency of the donation, indicating the user's contribution.

This is an excellent example of the possibilities of interaction design.



**Fundraising**

A single education workshop can cost up to £1000 please help us raise that amount.

Donate

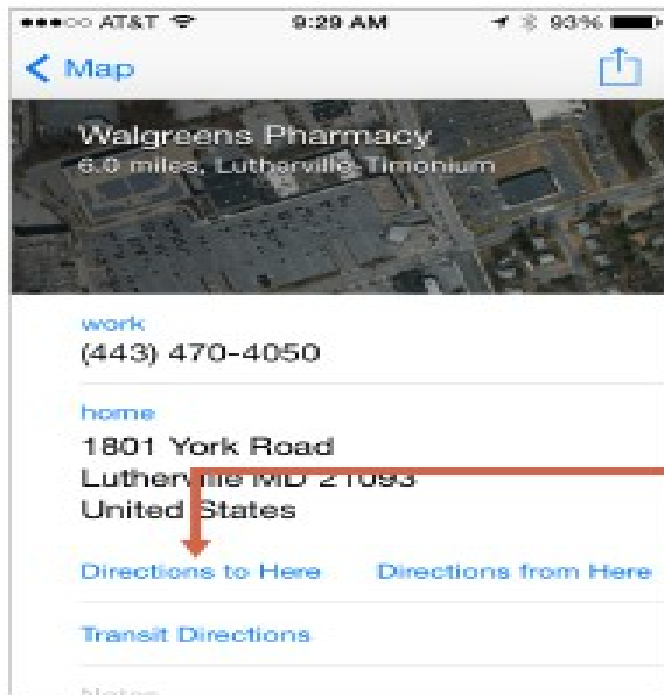
# Visibility

One of the ways our brain shapes experiences is that it's constantly noticing and interpreting clues in our surrounding environment: what is it, what does it mean, what does it do? And while we notice just about everything, there's a balancing act required for interaction design that (a) invites action and (b) is easily understood.

When we can't tell what's interactive, or when we can't tell the difference between options, we guess. We click, tap and swipe at everything in sight, which leads to coincidental system actions and results. And if those results aren't what we expected, we get nervous.

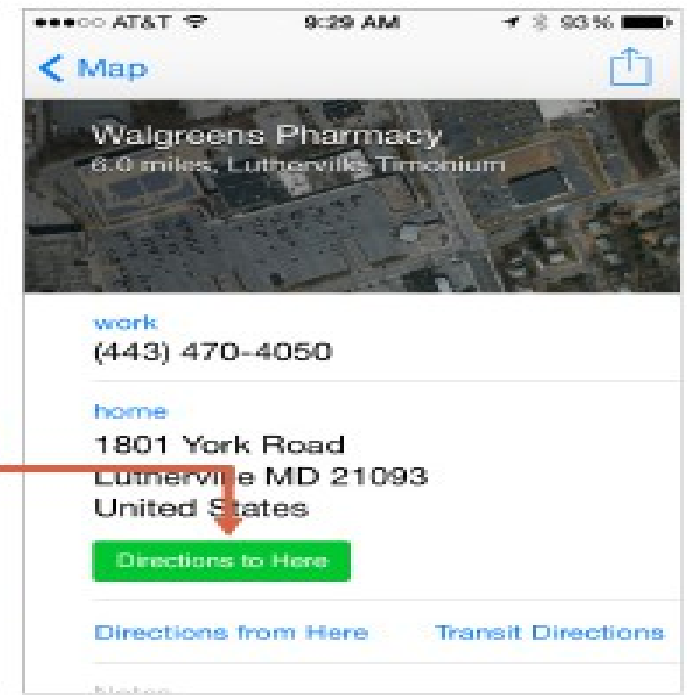
# USE OBVIOUS, ACCEPTED UI CONTROLS

## POOR VISIBILITY



making the **primary action** a button instead of a text link makes it more obvious, accessible and **visible**.

## GOOD VISIBILITY



# USE CONTENT HINTING; AVOID FALSE BOTTOMS



designing so content appears "cut off" at the bottom of the browser window indicates that more content and interactivity exists "below the fold" or beyond the visible space.

## CLICK & TAP

People will attempt interaction with **anything** that could possibly be clickable or touchable!

Use standard, commonly accepted UI components (e.g buttons) which are **understood** to be interactive.

Different **text color**, **3D** and icons all invite interaction.

## TOUCH & GESTURE

There is no **hover** for touch screens.

Consider the lefties of the world by making interfaces **reversible**.

Don't make people reach over the interface and **obstruct** their view.

## DRAG & DROP

Indicate **what** can be dragged.

Use **ghosting** during movement.

Indicate **where** objects can — and *cannot* — be dropped.

## SHOW & HIDE

Indicate when more content is available with commonly accepted control icons (e.g. +, -).

Use **adaptive** or **responsive** layouts: pages and columns change height (or width) in a liquid way.

USE **OBVIOUS**, ACCEPTED UI CONTROLS



# Learnability

When we talk about good interaction design, our ideal hope is that the people we've designed the app, site or system for will use it once, learn it rapidly and remember it forever.

The truth, Hogue says, is a little more practical. What usually happens is that they use it a few times, learn it, and hope they remember it for next time. Our job, as designers, developers and UX professionals of all stripes, is to make that learning and remembering possible. How do we do that? By making our interfaces intuitive.

## What “Intuitive” really means

While there are lots of opinions here, what the term intuitive truly means is “single trial learning.” Hogue explains that once we run through something, we've got enough of a handle on it that we'll be able to do it again. It simply means the interaction design is clear, consistent and visible enough that we'll be able to easily infer what to do first second, third, etc.

WE HAVE TO  
"GET IT"  
TO LEARN IT

The learnability of a design is based on comprehensibility: if you can't understand it, you can't learn it. And vice versa.



WE NEED  
EVIDENCE OF  
OUR ACTIONS

Touchscreen gestures, for example, are "invisible" and leave no trace — you can do something and get a desired result, yet not be able to understand or remember what you did!

This also invites **accidental** interaction (unintended touches).

WE WILL  
SPEND TIME  
LEARNING IF:

It's important.

It's something we'll do often.

The cost of use is low.

It's important.

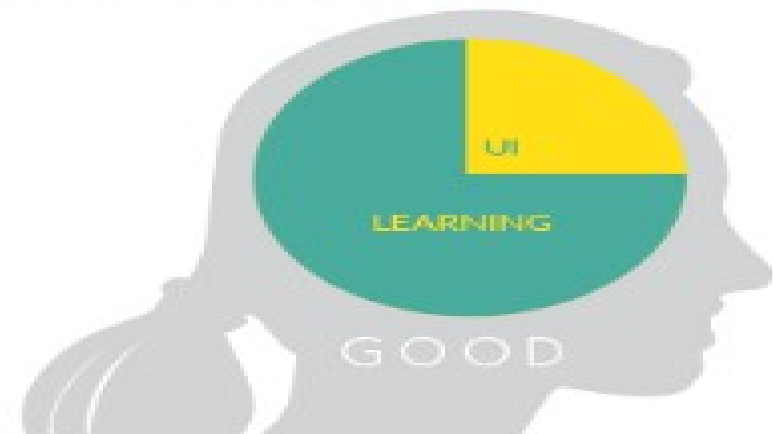
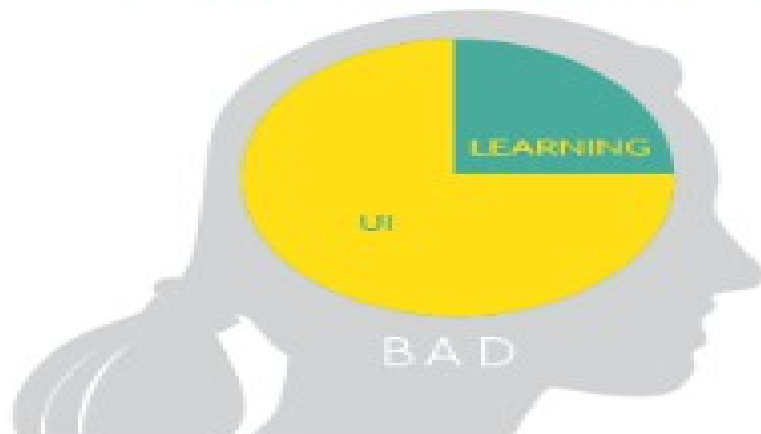
We have few alternatives.

Our first interactions seem simple.

MINIMIZE COGNITIVE LOAD TO MAXIMIZE LEARNABILITY

Restrict the number of items in the UI to those that are **critical** in allowing the user to take the very next step — everything else is noise. All someone needs at any given time is enough information to know what to do next, and an obvious cue to act.

When we're focused on trying to figure out the UI, there isn't very much processing power left over to actually **learn anything**. Less, in this case, truly is more.



# Predictability

“If you can accurately predict what’s going to happen in an interaction, it’s because the action you’re taking is understandable, clear, logical, and makes you feel confident.”

Robert Hoekman, Jr.

Predictability in interaction design can be measured pretty easily, and Steve Krug’s excellent book *Don’t Make Me Think* sums it up perfectly. Ask yourself if users will be able to answer these questions:

Where am I?

How did I get here?

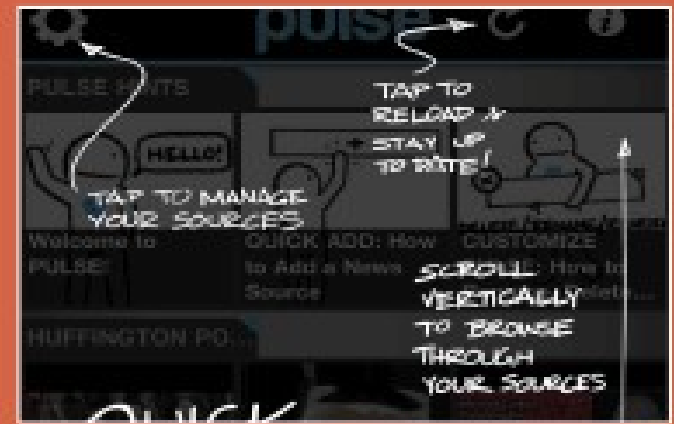
What can I do here?

Where can I go from here?

# 1 PREVIEW NEW OR COMPLEX INTERACTION

Show what can be done while the interface loads

Show a high-level view of the structure to provide context (a "map")



# 2 REMEMBER WE'RE CLICK-HAPPY

When we don't know **what** to do or **what we can** do, we'll attempt interaction with **anything** on the screen.

When we know **what we can** do and **what will happen**, we only interact with what's necessary to complete our task and accomplish our goals.



# 3 LABELS, ICONS AND IMAGES TELL US

**what to do**  
(touch here!)

**what will happen**  
(open this, drag this over there)

**where you'll go**  
(sense of place)

**how the screen will respond**  
(do X and Y will happen)

MINIMIZE WRONG GUESSES WITH CLEAR LANGUAGE

# Documentation and Feedback

Documentation doesn't have to be a dirty word, nor does it have to comprise a 500-page document. Instead, it helps tell a project's story.

-[uxbooth.com/articles/ux-documentation-why-what-and-how/](https://uxbooth.com/articles/ux-documentation-why-what-and-how/)

What does documentation include?

- Brief
- Identify Users
- Content Requirements
- Approach
- Information Architecture
- Interactions
- Navigation
- Concept Designs and Prototyping
- Specification

Feedback communicates the results of any interaction, making it both visible and understandable. Its job is to give the user a signal that they (or the product) have succeeded or failed at performing a task.

On desktops or laptops, when you hover over navigation items, you expect them to change colour or load a submenu. That's feedback, telling you that the item is clickable. progress bars and animations are also common feedback mechanisms, used to inform people that the system is doing something. And the simple act of using the correct visual form for controls (e.g. buttons that look like buttons, underlined text hyperlinks) provides immediate visual feedback.

# 1 ACTIONS NEED REACTIONS

every action should produce a **visible, understandable** and **immediate** reaction

let people know they have been **heard** (or felt or seen)



# 2 GIVE GOOD FEEDBACK

**don't interrupt the experience**  
complement, not complicate

allow undo to reverse choices  
(and correct mistakes)

**mistakes are incorrect choices,**  
**but don't always result in errors**  
I can accidentally transfer \$1000  
instead of \$100, but it's not an  
error unless I don't have \$1000!

## Your file is being sent...

To: [sean@bart@yaho.com](mailto:sean@bart@yaho.com)

26% completed (560KB of 1.78MB)  
Estimated time remaining: 27 seconds

Shasha\_pencil.png 1.78MB

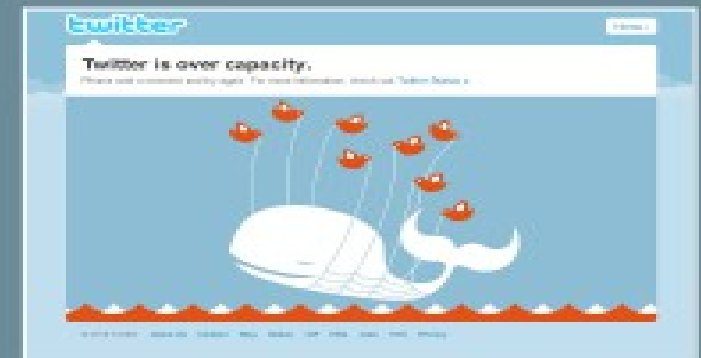


Please do not close this page or click the back button until the file has been sent.

# 3 GIVE GOOD ERROR MESSAGES

error prevention is ideal, but  
when they do happen, error  
messages should:

1. describe **what** happened
2. explain **why** it happened
3. suggest a **fix**
4. **never blame** the user



# Summative Assessment

- Logo Animation
- Application/website Evaluation
- Exam

Using Summative Assessment Guide PDF  
(You have been provided with this)

# WORKSHOP

Make a basic UX plan for an imaginary client.

Brain storm the product and take industry examples and note what you have learnt this lesson and apply it to analysis of the researched examples.

Outline this research and suggest customer journey or story board for design and layout.

Pay close attention to Fibonacci Spirals, design principals and HCI design principals that you have been taught up to know.