Usability for Developers

Who am I?

- Elizabeth Tucker Long (Beth - @e3betht)
- Editor-in-Chief of php|architect magazine

Want to write?
See me after.

- PHP Essentials Instructor
- Freelance consultant

Audience Participation?

- Yes, there will be. So, when I ask the audience a question, don't be shy about answering.

Usability

- According to Wikipedia:
  Usability is the ease of use and learnability of a human-made object.

- According to Beth:
  Usability means structuring things so you don't leave your users angry, frustrated, and complaining about you on Facebook or Twitter.

Importance of Usability

- What is the first thing people will do when a site is difficult to use?

Where to Start

- Who are your users?
- What do you want them to do on your site?
- What do they want to do on your site?
- How tech-savvy are your users?
- Where will your users go if your site isn't working for them?

Once You Have a Design

Jakob Nielsen's Five Quality Components of Usability:

1. **Learnability**: How easy is it for users to accomplish basic tasks the first time they encounter the design?
2. **Efficiency**: Once users have learned the design, how quickly can they perform tasks?
3. **Memorability**: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
4. **Errors**: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
5. **Satisfaction**: How pleasant is it to use the design?

Common Problems to Avoid

- Know your user, and you are not that user.

- Don't overwhelm the user.

- Consistency, consistency, consistency.

- Minimize the need for a mighty memory.

Typing Practice

Account Information

Email Address *

Password *

Confirm Password *

Personal Information (see Privacy Policy)

First Name *

Last Name *

Address Line 1 *

Address Line 2

City *

State *

Select a state

Zip *

Country *

United States

Special Shipping Instructions?

Sign Me Up

Typing Practice

Account Information

Email Address *

beth@blueparabola.com

Password *

****

Confirm Password *

****

Personal Information (see Privacy Policy)

First Name *

Beth

Last Name *

Tucker Long

Address Line 1 *

123 Street Boulevard

Address Line 2

City *

That Place

State *

That State

Zip *

12345

Country *

United States

Special Shipping Instructions?

Sign Me Up

Typing Practice

Your passwords do not match. Please try again.

Account Information

Email Address *

[   ]

Password *

[   ]

Confirm Password *

[   ]

Personal Information (see Privacy Policy)

First Name *

[   ]

Last Name *

[   ]

Address Line 1 *

[   ]

Address Line 2

[   ]

City *

[   ]

State *

[Select a state   ▼]

Zip *

[   ]

Country *

[United States   ▼]

Special Shipping Instructions?

[Sign Me Up]

Typing Practice

Don't delete good data. If it's good, keep it. Don't make the users do any more work than is necessary.

The Sneak Attack

Account Information

Email Address *

beth@blueparabola.com

Password *

****

Confirm Password *

****

Personal Information (see Privacy Policy)

First Name *

Beth

Last Name *

Tucker Long

Address Line 1 *

123 Street Boulevard

Address Line 2

City *

That Place

State *

Select a State

Zip *

12345

Country *

United States

Special Shipping Instructions?

Sign Me Up

The Sneak Attack

Please choose a State

Account Information

Email Address *

    beth@blueparabola.com

Password *

Confirm Password *

Personal Information (see Privacy Policy)

First Name *

    Beth

Last Name *

    Tucker Long

Address Line 1 *

    123 Street Boulevard

Address Line 2

City *

    That Place

State *

    Select a State ▼

Zip *

    12345

Country *

    United States ▼

Special Shipping Instructions?

Sign Me Up

The Sneak Attack

Error messages should actually mean something to the user
and tell the user how to fix the problem.

The Sneak Attack

Please choose and state. For security reasons, please reenter your passwords.

Account Information

Email Address *

beth@blueparabola.com

Password *

Confirm Password *

Personal Information (see Privacy Policy)

First Name *

Beth

Last Name *

Tucker Long

Address Line 1 *

123 Street Boulevard

Address Line 2

City *

That Place

State *

Select a State ▼

Zip *

12345

Country *

United States ▼

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The Sneak Attack

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Address Line 2

City *

That Place

State *

Zip *

12345

Country *

United States

Special Shipping Instructions?

Sign Me Up

Be Forgiving and Empowering

- Everyone makes mistakes, so every mistake should be fixable.

- The user should control the system. The system should not control the user. The user is the boss and the system should show it.

- User should be able to do what they want.

- Alert users to an error before things get worse.

- Strive to empower the user, not speed up the system.

Button Roulette

Button Roulette

Button Roulette

Button Roulette

Keep things consistent. Users click without reading. Users don't want to have to read before clicking.

Button Roulette

Account Information

Email Address *

Password *

Confirm Password *

Personal Information (see Privacy Policy)

First Name *

Last Name *

Address Line 1 *

Address Line 2

City *

State *

Select a State ▼

Zip *

Country *

▼

Special Shipping Instructions?

Clear Form

Sign Me Up

Button Roulette

Account Information

Email Address *

Password *

Confirm Password *

Personal Information (see Privacy Policy)

First Name *

Last Name *

Address Line 1 *

Address Line 2

City *

State *

Select a State

Zip *

Country *

Special Shipping Instructions?

← Clear Form

Sign Me Up →

Great Expectations

Resources:
- **A Day in the Life of an Astronaut**
- **Biography of Neil Armstrong**
- **Early photos of astronaut training**
- **Buzz Aldrin, in his own words**

Great Expectations

The user should always know what is happening.

Surprising things can be scary.

Great Expectations

The user should always know what is happening

Resources:
- **A Day in the Life of an Astronaut**
- **Buy the Biography of Neil Armstrong on Amazon**
- **Early photos of astronaut training (slideshow)**
- **Buzz Aldrin, in his own words (PDF)**

Cliff Notes

Welcome, Friend [Create an Account]

This site is an awesome place to do things and buy stuff and you should visit it every day.
This site is an awesome place to do things and buy stuff and you should visit it every day.
This site is an awesome place to do things and buy stuff and you should visit it every day.

We have an awesome catalog of **great products**

[Sign Up Today]

Have you checked out our **newsletter**? [Sign Up Today]

Learn more about how awesome our **great products** are!

[Check Them Out]

Browse our awesome catalog of **great products**

[Check Them Out]

Cliff Notes

Users should always be able to find out
what to do next just by skimming the page.

Cliff Notes

Welcome

Create an Account

This site is an awesome place to do things and buy stuff and you should visit it every day.
This site is an awesome place to do things and buy stuff and you should visit it every day.
This site is an awesome place to do things and buy stuff and you should visit it every day.

Learn More About Our Products

We have an awesome selection of products. They are just the greatest in the whole world.
We have an awesome selection of products. They are just the greatest in the whole world.
We have an awesome selection of products. They are just the greatest in the whole world.

Read Reviews   **View Catalog (PDF)**

More Information:

If you would like more information, we offer a weekly **newsletter** as well as a printed **catalog of our products**. Both are free of charge.

Sign Up Today

Cliff Notes

Welcome to our site! It looks like you don't have an account yet, be sure to **sign up** for an account to receive the maximum benefits from our site. Also, we have a great newsletter that you can **sign up** for as well. We have some great reviews of our products on **this site**, and you can **click here** to view the products we have available for purchase.

Cliff Notes

Welcome to our site! It looks like you don't have an account yet, be sure to **create an account** for an account to receive the maximum benefits from our site. Also, you can **sign up for our great newsletter** as well. While you are here, you can **read product reviews** as well as **browse our products** that we have available for purchase.

Unicorn Puke

Welcome to **our site**! It looks like you don't have an account yet, be sure to **sign up** for an account to receive the maximum benefits from our site. Also, we have a great newsletter that you can **sign up** for as well. We have some great reviews of our products on **this site**, and you can **click here** to view the **products** we have available for purchase.

Unicorn Puke

Just Don't.

Things that look the same should act the same.
Things that look different should act differently.

Lost in Translation

The information for the decision must be there when the decision is needed.

Pizza Size:
o 12"
o 18"
o 24"

Pizza Crust:
o Joe's Specialty
o The Original
o The New Original

Lost in Translation

The information for the decision must be there when the decision is needed.
Make sure you are using the language of your users.

Lost in Translation

Pizza Size:

o 12" (feeds 1-2)

o 18" (feeds 2-3)

o 24" (feeds 3-4)

Pizza Crust:

o Joe's Specialty

Hand-tossed with cheese baked into the crust.

o The Original

Traditional thin crust.

o The New Original

Our traditional thin crust, now with special seasoning baked in.

How to Test

- Create Personas
- Create a script/list of the most common procedures or tasks on your site
- Identify success criteria
- Sit down with users individually and give them one task at a time

What to Test?

- Old design
- Competitor's websites
- Sites popular with your users
- Proposed site

Design in Stages

- Create your design
- Test it on users
- Improve your design
- Test it on users
- Improve your design
- Test it on users
- And so on…

Keep It Simple

- The more often your user has do something, the easier it should be to do.

- Don't waste clicks, keystrokes, and time.

Brace Yourself

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"Fostering Curiosity, Discovery & Innovation to benefit society."

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Vision, Mission, Goals, Objectives & Core Values
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The Academy TODAY

Registration deadline extended:
Tuesday, September 25, 2012

Entrepreneurial Engagement Ohio

Entrepreneurial Engagement Ohio and The Ohio Academy of Science Invite You to Attend Their

Fall 2012 STEMM Invention, Commercialization & Entrepreneurship Forum

Let us not forget ...
Neil Armstrong 1930-2012

If at first you don't succeed...
you may walk on the moon someday!
Read about Astronaut Armstrong's Experience in the late 1940s at a District Science Day at Bowling Green State University.

State Science Day
Science Day Standards

Map and [Ohio map]
Roster of contacts
District Science Days
Local Science Day Certificates
Templates for Judging Cards
Science Day Guide online

Science Fair 101
Science Fair 101

Have you visited the Knowledge Bank?

The Ohio Journal of SCIENCE Digital Archives
Knowledge Bank

The Ohio Journal of Science
Environmental Science Scholarships

Important Dates

2013 Annual Meeting
April 6, 2013
University of Findlay
Call for Papers deadline Nov. 5, 2012

February 1, 2013
Ohio Patent Award

March 2013
District Science Days at 15 locations

May 11, 2013
State Science Day at The Ohio State University

October 1, 2012 and May 1, 2013
Postmarked Deadline for Environmental Science Scholarship Applications

June 20, 2012
Postmarked deadline for Governor's Thomas Edison Awards for Excellence

What is the Academy?
The Ohio Academy *of* Science is a membership based, volunteer-driven, not-for-profit organization. The Academy is the leading organization in Ohio to foster *curiosity*, *discovery*, and *innovation* and to unite all who value education, science, engineering, technology, or

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http://www.ohiosci.org

WET Water Equipment Technology

A Design and Consultancy Business

Lake & Pond Management

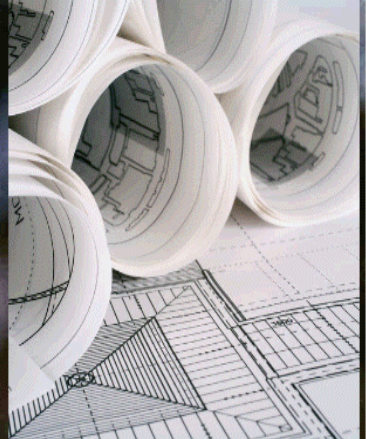**Stormwater Harvesting & Storage**

Water Equipment Technology is a professional company that offers critical support in harvesting, storing and the efficient application of your water supply.

Our business strategy is Sustainable Water Management Solutions

Design & Consultancy

Audits & Assessments

A Sustainable quality water supply is the life blood of any Agricultural Property, Horticultural Garden or Sporting Arena. This day and age, such irrigators must have their own water supply complete with a water usage management plan to guarantee themselves of an uninterrupted sustainable water supply.
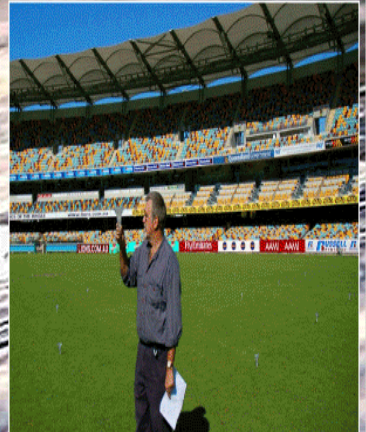
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CERTIFIED IRRIGATION DESIGNER
IRRIGATION AUSTRALIA
LANDSCAPE/TURF GOLF

http://www.waterequipment.com.au

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WET Water Equipment Technology

A Design and Consultancy Business

Lake & Pond Management

Stormwater Harvesting & Storage

Water Equipment Technology is a professional company that offers critical support in harvesting, storing and the efficient application of your water supply.

Our business strategy is Sustainable Water Management Solutions

Design & Consultancy

Audits & Assessments

A Sustainable quality water supply is the life blood of any Agricultural Property, Horticultural Garden or Sporting Arena. This day and age, such irrigators must have their own water supply complete with a water usage management plan to guarantee themselves of an uninterrupted sustainable water supply.

CERTIFIED IRRIGATION DESIGNER
IRRIGATION AUSTRALIA
LANDSCAPE/TURF/GOLF

@Designed by Technogeek - ByteMe Website Design

http://www.waterequipment.com.au

http://www.facebook.com

http://www.facebook.com

Google

CREATE AN ACCOUNT

Gmail

A Google approach to email.

Gmail is built on the idea that email can be more intuitive, efficient, and useful. And maybe even fun. After all, Gmail has:

Lots of space
Over 10293.662278 megabytes (and counting) of free storage.

Less spam
Keep unwanted messages out of your inbox.

Mobile access
Get Gmail on your mobile phone. Learn more

About Gmail   New features!   Switch to Gmail   Create an account

Take Gmail to work with Google Apps for Business
Love Gmail, but looking for a custom email address for your company?
Get business email, calendar, and online docs @your_company.com. Learn more

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Password

Sign in   ☐ Stay signed in

Can't access your account?

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http://www.gmail.com

Recap

- **Typing Practice** – Don't delete good information
- **Sneak Attack** – Be clear on what is missing
- **Button Roulette** – Keep buttons consistent
- **Too Many Cooks** – Make the path obvious
- **Cliff Notes** – Make the content scannable
- **Unicorn Puke** – Pick a color and stick with it
- **Great Expectations** – Same cause, consistent effect
- **Lost in Translation** – Use the user's language

Lund, A. M. (1997). Expert ratings of usability maxims. Ergonomics in Design, 5(3), 15-20. A study of the heuristics design experts consider important for good design.

When evaluating the design and usability of a website, consider the following:

1. Know the user, and You are not the user.
2. Things that look the same should act the same.
3. The information for the decision must be there when the decision is needed.
4. Error messages should actually mean something to the user and tell the user how to fix the problem.
5. Every action should have a reaction.
6. Everyone makes mistakes, so every mistake should be fixable.
7. Don't overwhelm the user.
8. Consistency, consistency, consistency.
9. Minimize the need for a mighty memory.
10. Keep it simple.
11. The user should always know what is happening.
12. The more you do something, the easier it should be to do.
13. The user should control the system. The system should not control the user. The user is the boss and the system should show it.
14. Eliminate unnecessary decisions and illuminate the rest.
15. The best journey has the fewest steps. Shorten the distance between the user and the goal.
16. User should be able to do what they want.
17. Alert users to an error before things get worse.
18. Users should always know how to find out what to do next.
19. Strive to empower the user, not speed up the system.
20. Things that look different should act different.
21. These are presented in a descending order determined by their mean rating of importance.

Sites to check out

- Usability First - http://www.usabilityfirst.com/
- Usability Toolkit - http://www.stcsig.org/usability/resources/toolkit/toolkit.html
- http://www.usability.gov/
- Jakob Nielsen - http://www.useit.com/

Find Me

- Twitter: e3betht

- Madison PHP User Group (Meetup)
  http://www.madisonphp.com

- Slides Available on joind.in and:
  http://www.TreelineDesign.com/slides

Ask me about writing articles for php|architect magazine!
http://www.phparch.com

Feedback

Joind.in:

https://joind.in/8059

E-mail:

Beth@BlueParabola.com