

2.3.5 Heuristic evaluation

What is a heuristic evaluation?

- Heuristics are rules-of-thumb or guidelines about what makes a website usable
- The most common set of heuristics were developed by Jakob Nielsen in the early 90s
- Many different sets of heuristics exist for dedicated design domains
- They are a low-cost way of making sure that your site will avoid common usability problems by involving other people in critiquing your design

Nielsen's heuristics

- **Visibility of system status**
 - Always keep users informed about what is going on
- **Match between system and the real world**
 - Follow real-world conventions, using natural language & making information appear in a natural and logical order.
- **User control and freedom**
 - Don't box the user in. Support undo and redo.
- **Consistency and standards**
 - Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.
- **Error prevention**
 - Prevent problems from occurring
- **Recognition rather than recall**
 - The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

[Full article on Nielsen's heuristics](#)

Nielsen's heuristics

- **Flexibility and efficiency of use**
 - Support shortcuts for experienced users
- **Aesthetic and minimalist design**
 - Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.
- **Help users recognize, diagnose, and recover from errors**
 - Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.
- **Help and documentation**
 - Even though it is better to design a system that doesn't need documentation, if you have it make it focussed on the users' task and useful

[Full article on Nielsen's heuristics](#)

How to do a heuristic evaluation

- Get between 1 and 5 designers or researchers and brief them on the website. Give them a copy of the heuristics you're using
- Working independently, they review the relevant screens of the site against the heuristics
- In a workshop afterwards, they compare issues they found to agree a final set of prioritised usability issues
- You can also use the heuristics while you are designing as a sanity check, but others will always bring a more objective eye

Strengths & weaknesses

- Heuristics are quick to apply and have stood the test of time as principles for design
- But they are only a rule of thumb, they are not infallible
- Heuristics are only as good as the critical thinking of the person who is applying them
- No set of heuristics can address all the criteria of your website
- But they are a great way to help develop a sense of what makes up a usable website

Task: Conduct a heuristic evaluation...

- Conduct a heuristic evaluation of the TfL Journey Planner:
<http://www.tfl.gov.uk/journeyplanner>
- We have the user journey for a cycle trip from Birkbeck to St John's Park on paper prototypes
- Use Nielsen's heuristic evaluation and make notes in these headings
 - **Website feature:** What part of the site is of interest?
 - **User implication:** What is the likely impact on users? Confusion, etc
 - **Priority:** How important is the issue
 - **Recommendation:** What should be done about the problem?
- Remember to include good as well as bad points

2.3.6 Cognitive Walkthrough

What is a cognitive walkthrough?

- A cognitive walkthrough is a complementary analytical technique that focuses on how easy a site is to learn
- This is a good exercise to ensure your site has a good information scent and that core tasks (like purchase) are well-supported
- Cognitive walkthroughs focus on three key questions

Will the user understand what their next action has to be to complete their task?

The screenshot shows the dabs.com website. At the top, the logo 'dabs.com' is followed by the tagline 'Lowering technology prices... every day!'. Navigation links include 'wishlist', 'help', and 'log in'. A secondary navigation bar contains categories like 'home', 'shop by brand', 'components & storage', 'computers', 'electronics', 'networking & communication', 'peripherals', 'software & books', 'clearance corner', and 'dabs.tv'. A search bar is present with a 'show ex vat prices' link and a 'quicklink' field. Below this, a banner for 'Product Finder' with a magnifying glass icon and the text 'Find the right component first time' is displayed. To the left is a 'Browse Category' sidebar with a tree structure: components & storage (Cases & Cooling, Graphics, Multimedia & I/O, Memory, Motherboards & Processors, Storage), computers (Desktops & Servers, Laptops & PDAs), electronics (Cameras & Camcorders, Gaming & Gadgets, GPS Navigation, Home Audio/Video/TVs, In Car, Portable Audio/Video, Security & Home Monitoring, Telephony), networking & communication (Network Devices, Power Protection, Racking & Infrastructure), peripherals (Cables & Sharing, Displays & Projectors, Input Devices, Office Products, Printers & Scanners, Speakers, Headsets & Microphones, Warranty Packs & Services), software & books, and Books. The main content area features a 'Dabs Value 19" Widescreen LCD with built in Freeview and DVD' for £129.00, marked as a 'star buy!'. Below this is a 'HOT DEALS' section with four items: a Lenovo S10e laptop for £248.99, a Samsung PS50A457C1D Plasma TV for £669.00, an XFX GeForce 8800GT graphics card for £600/1.8, and an Acer EXTENSA 5230 laptop for £575. A 'My Basket' sidebar on the right shows an empty basket with the instruction 'Add an item by clicking ADD next to the product of your choice.' A large green speech bubble on the right contains the text: 'I'm looking for a nice looking USB stick with at least 4GB, what should I do?'. At the bottom right, there is a promotion for 'CLASS £5 POUCH' and 'STUNNING GRAPHICS. PHYSX™. TRUE 3D GAMING. NVIDIA® GEFORCE® GTS 250 GPU'.

I'm looking for a nice looking USB stick with at least 4GB, what should I do?

Will the user see how to take their next action?

The screenshot shows the dabs.com website. At the top, the logo 'dabs.com' is followed by the tagline 'Lowering technology prices... every day!'. Navigation links include 'wishlist', 'help', and 'log in'. A secondary navigation bar contains categories like 'home', 'shop by brand', 'components & storage', 'computers', 'electronics', 'networking & communication', 'peripherals', 'software & books', 'clearance corner', and 'dabs.tv'. Below this is a search bar with a 'show ex vat prices' link and a 'quicklink' field. A welcome message for 'Mr Andrew Harder' is displayed. The main content area features a 'Product Finder' banner, a 'My Basket' section, and a 'HOT DEALS' section with various product listings. A speech bubble on the right side of the page contains the text: 'Now, where do I start... Can I search?'.

dabs.com Lowering technology prices... every day!

wishlist help log in

home shop by brand components & storage computers electronics networking & communication peripherals software & books clearance corner dabs.tv

show ex vat prices search Entire Site GO quicklink GO

buy now pay Mar 10 buying for business? return goods Welcome, Mr Andrew Harder (if not [click here](#))

Browse Category

- components & storage
 - Cases & Cooling
 - Graphics, Multimedia & I/O
 - Memory
 - Motherboards & Processors
 - Storage
- computers
 - Desktops & Servers
 - Laptops & PDAs
- electronics
 - Cameras & Camcorders
 - Gaming & Gadgets
 - GPS Navigation
 - Home Audio/Video/TVs
 - In Car
 - Portable Audio/Video
 - Security & Home Monitoring
 - Telephony
- networking & communication
 - Network Devices
 - Power Protection
 - Racking & Infrastructure
- peripherals
 - Cables & Sharing
 - Displays & Projectors
 - Input Devices
 - Office Products
 - Printers & Scanners
 - Speakers, Headsets & Microphones
 - Warranty Packs & Services
- software & books
 - Books
 - Software
- clearance corner

Product Finder
Find the right component first time

My Basket
Add an item by clicking **ADD** next to the product of your choice.

Dabs Value 19" Widescreen LCD with built in Freeview and DVD
In stock now
quicklink: 4ZG6WS
mfr#: LTV-1929WHTC
£129.00 inc vat
1 **ADD**
★★★★★

HOT DEALS

Lenovo S10e Atom N270 1GB 160GB XP Home Black
In stock now
quicklink: 5BTYWS
mfr#: NS84SUK
Excellent price! £248.99 inc vat
1 **ADD**
★★★★★

Samsung PS50A457C1D 50" Plasma TV
In stock now
quicklink: 52WTWS
mfr#: PS50A457P1DXXU
Clearance Price - Strictly Whilst Stocks Last £669.00 inc vat
1 **ADD**

XFX GeForce 8800GT 512MB DDR3 PCIE Dual DVI TV 600/1.8
In stock now
quicklink: 4S0HWS
mfr#: PV-T88P-YDF4
Back In Stock - Amazing Price & Amazing Performance
★★★★★

Acer EXTENSA 5230 CelM 1GB 160GB DVDRW VistaHome
In stock now
quicklink: 5FJ5WS
mfr#: LX.EBA0Y.054
Exceptional features and value for money
★★★★★

Now, where do I start... Can I search?

March Components CLEAR OUT

Will the user understand that they have successfully completed, or failed to complete, the right action?

- Now, what does this mean?

Toshiba Easyguard

TOP 10 WEBSITE hitwise 2008

dabs.com Email Offers Sign up now

Refine Your Search

! Your search phrase covers products in multiple categories. To help us display the products that you are looking for please choose a category or brand from the following selection:

Brand: [Sony \(4\)](#), [Toshiba \(1\)](#)

Stock Status: [In Stock \(4\)](#)

Components & Storage: [Memory \(1\)](#)

Computers: [Desktops & Servers \(2\)](#), [Laptops & PDAs \(2\)](#)

Search Results 1 - 5 products displayed out of 5

sort by Popularity items per page 10

COMPARE	product description	in stock	inc vat	qty
<input type="checkbox"/>	Sony - Memory Stick Micro 4GB + USB Adapter quicklinx: 5BBDWS mfr#: MSA4GU2	In stock now	£19.38	1 ADD
<input type="checkbox"/>	Toshiba Case, 4GB USB & Mouse Bundle quicklinx: 5CVFWS mfr#: PX1414-B2S	Delivery 3-5 days	£34.99	1 ADD
<input type="checkbox"/>	Sony VAIO - CS21SW Core 2 Duo T6400 4GB 320GB 14.1" WXGA DVD+/-R+/-RW Vista Home Premium quicklinx: 5FLVWS mfr#: VGNCS21S/W.CEK	In stock now	£832.51	1 ADD
<input type="checkbox"/>	Sony VAIO - CS21SW Core 2 Duo T6400 4GB 320GB 14.1" WXGA DVD+/-R+/-RW Vista Home Premium quicklinx: 5FLVWS mfr#: VGNCS21S/W.CEK	In stock now	£832.51	1 ADD
<input type="checkbox"/>	Sony VAIO - TP3Z/B Core 2 Duo T8100 2GB 500GB DVD+/-R+/-RW Vista Home Premium quicklinx: 5BVCWS mfr#: VGXTP3E/B.CEK	In stock now	£748.99	1 ADD
<input type="checkbox"/>	Sony VAIO - TP3E/B Core 2 Duo T8100 500GB 2GB DVD+/-R+/-RW Vista Home Premium quicklinx: 5BVCWS mfr#: VGXTP3E/B.CEK	In stock now	£499.10	1 ADD

sort by Popularity items per page 10

Hot Laptop Deals

- Best Price Blu-ray Laptop - Acer 15.4inch!
- The New Lenovo S10 Netbook With XP Home
- Lenovo N500 With Vista Home Premium
- Lenovo N500 With Vista Home Premium
- Dell Latitude Laptop - In Stock For Same Day Dispatch! Under £300!
- Award Winning Samsung NC10 Netbook
- Toshiba 8.9inch Netbook With 80GB Hard Drive!

dabs.com

Am I on the right track?

Applying cognitive walkthroughs

- As another analytical method, you use the same approach as heuristics:
- Get a group of designers or researchers together with a prototype of your site and let them loose
- You then get their feedback and agree a list of common usability problems they've identified

Strengths & weaknesses

- Like the heuristic evaluation, a cognitive walkthrough is **relatively quick and cheap**
- It complements heuristic evaluation by **focussing on the users journey** through the website to complete key tasks
- This means that key features like buying will be surfaced
- Because it focuses on learnability, it **won't help you cater to the needs of expert users**, or help identify broader non-transactional objectives like building brand identity

Task: Conduct a cognitive walkthrough...

- Do you own cognitive walkthrough of the paper prototypes of <http://www.dabs.com>
- Use the three key questions and make notes on the same headings
 - **Website feature:** What part of the site is of interest?
 - **User implication:** What is the likely impact on users? Confusion, etc
 - **Priority:** How important is the issue
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