



Improving e-Learning Course Design with Usability Testing

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Key Points - Usability Testing (UT) for E-Learning

UT overview

Impact of the rapid growth of online learning

Introduction of UT for e-learning

Results of a case study examining UT

Future use of UT for e-learning





E-Learning vs. Traditional Education



6.1 million students
took an online course
in fall 2010—*10.1%
increase from 2009*





E-Learning Retention Rates

Drop out rates for e-learning can be as high as 50%

Research studies

Howell, Laws & Lindsay (2004)

Morris, Wu & Finnegan (2005)

Shelton & Saltsman (2005)

Levy (2007)

Liaw (2008)





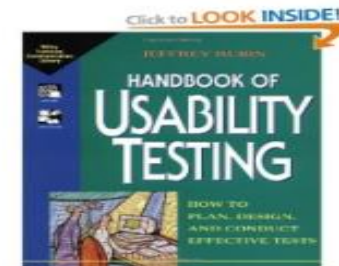
UT Effectiveness

Not a new practice

Used for website development

Used in e-governance

Used in commerce





Importance of UT

Make websites easier to use

Increase sales and customer satisfaction

Enable customers to easily find products

Help translate web presence into mobile platforms





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Are you prepared?



[Hurricane, flood, tornado, or wildfire](#) safety tips

Teach your kids know what to do [if the smoke alarm sounds](#)

[Get your business prepared](#) for an emergency

[Protect your home/business](#) from the financial damages of flooding



Are you a disaster survivor?



[3 Step Guide for Assistance](#)

- [Apply Online](#)

- Call (800) 621-3362 / TTY (800) 462-7585

[State Disaster pages:](#) [Alabama](#), [Arkansas](#), [Georgia](#), [Mississippi](#), [Missouri](#), [North Carolina](#), [Oklahoma](#) & [Tennessee](#)

[Recovery and rebuilding tips](#)

[Find a Disaster Recovery Center](#)

DisasterAssistance.gov
ACCESS TO DISASTER HELP AND RESOURCES

Updates & Ongoing Activities



It's hurricane season - [get prepared today](#)

Videos: [How to help Joplin](#) & [Distributing kits](#) with commonly used shelter items

[Recovery updates on the blog](#)

- Alabama: [One month update](#)

- Missouri: [Thanking first responders](#)

- Tennessee: [Supporting recovery efforts](#)

[President Obama](#), [Secretary Napolitano](#) tour areas in recovery

[2011 grant guidance](#) and application kits

What are you looking for?

[State & Local government resources](#)

Find information on preparedness, response, recovery, and mitigation.

[Regional Offices](#)

Learn about support for states, commonwealths, territories, tribal nations and more...

[Kids Site](#)

Play games, help prepare your family for emergencies, and other fun stuff.

[Resources for Private Sector](#)

Businesses, Academia, Non-Government and other Organizations.

Emergency Personnel Resources

[Firefighters Grant Program](#)

[NIMS resource center](#)

[NRF resource centers](#)

[Training](#)

[All resources](#)

Flood Information

[Flood Insurance](#)

[Flood Maps](#)

[All Flood Information](#)

Resources

[Policies](#), [Forms](#), [Publications](#)

[Grants](#)

[Career Opportunities](#)

[File a Discrimination Complaint](#)

Joplin Tornado: How You Can Help





Origins of UT

Jakob Nielsen

<http://www.useit.com>

Researching web usability
since 1994

Jakob Nielsen

**Designing
Web Usability**



The Advantages of UT for E-Learning

Potential to:

Improve the educational experience

Increase learner outcomes

Impact student retention rates





Formal and Informal UT





Quality Usability Measures

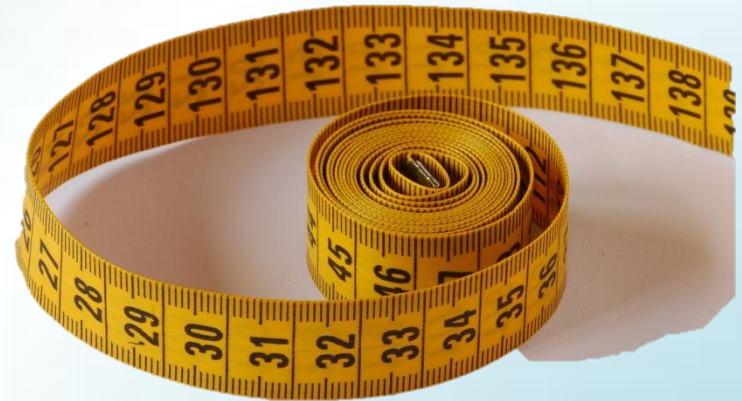
Learnability

Efficiency

Memorability

Errors

Satisfaction

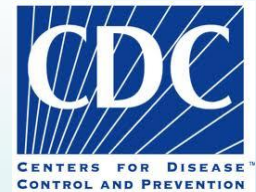




The Case Study:

US Centers for Disease Control and Prevention (CDC)

CDC provides expertise, information, and tools that people and communities need to protect their health—health promotion, prevention, education and training



PDP a continuing professional education program for working professionals in the public sector—offers traditional & non traditional programs





The Case Study

User testing on initial module developed for the CDC to teach partner services for health care workers nationally

Partner services are counseling and referral services for patients with sexually transmitted diseases and their social contacts



UT Case Study Results

Before UT

Passport to Partner Services
Principles of Partner Services
Topic 3, Page 5 of 5

Topic 3: Partner Services Referral Strategies and Roles

Key Considerations in Selecting Referral Strategies

Provider Referral Found to be Effective
Provider referral is found to be effective in identifying cases of HIV infection (Preventive Services evidence review). Effectiveness of provider referral (or third-party referral) depends on provider's ability to identify and notify potential partners. When not used, referral strategies might be less effective. Internet Partner Services (IPS) is the process of notifying a potential partner via the Internet to conduct or permit provider referral. Referral is common for sexually transmitted diseases. Types of referral approaches may include self-referral, newly diagnosed or reported HIV, Internet-based approaches may

Sufficient Information Required for Effective Provider Referral
Effectiveness of provider referral (or third-party referral) depends on provider's ability to identify and notify potential partners. When not used, referral strategies might be less effective. Internet Partner Services (IPS) is the process of notifying a potential partner via the Internet to conduct or permit provider referral. Referral is common for sexually transmitted diseases. Types of referral approaches may include self-referral, newly diagnosed or reported HIV, Internet-based approaches may

Prompt Notification by Provider Referral
Infection spread of primary and secondary syphilis depends on prompt notification and treatment of the primary infection. Prompt notification and treatment of the primary infection can reduce the risk of secondary syphilis. Prompt notification and treatment of the primary infection can reduce the risk of secondary syphilis.

We've just reviewed advantages and disadvantages of each type of referral strategy. Now, let's take a look at some additional factors that might influence the choice of strategy.

Click on the newspaper clippings to read the results of research on the effectiveness of referral strategies.

After UT

Passport to Partner Services
Introduction to Partner Services for Partner Services Providers
Topic 3, Page 5 of 5

Topic 3: Partner Services Referral Strategies and Roles

Key Considerations in Selecting Referral Strategies

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We've just reviewed advantages and disadvantages of each type of referral strategy. Now, let's take a look at some additional factors that might influence the choice of strategy.

Instructions

Click on the newspaper clippings to read the results of research on the effectiveness of referral strategies.



Changes after UT

Animation changed with explanation

The screenshot shows a web application interface for 'Passport to Partner Services'. The top navigation bar is blue and contains the following elements from left to right: a logo with a globe and the text 'Passport to Partner Services', the text 'Passport to Partner Services', the text 'Introduction to Partner Services for Partner Services Providers', a left arrow button, a 'Topic Menu' button, and a right arrow button. Below the navigation bar, the page title 'Partner Services Process Diagram' is displayed on the left, and 'Topic 2, Page 3 of 4' is on the right. Below the title, there are 'Pause' and 'Open Print Version' buttons. The main content area is white and contains a box with the text 'New case reported to health department'. Below this, there is an 'Instructions' section with a blue information icon, the text 'Watch the Partner Services Process Diagram as it plays.', and a paragraph stating 'You will be able to move and examine the diagram after it has finished playing.' At the bottom of the instructions box is a 'Begin' button.

Passport to Partner Services
Introduction to Partner Services for Partner Services Providers

Topic Menu
Topic 2, Page 3 of 4

Partner Services Process Diagram
Pause Open Print Version

New case reported to health department

i **Instructions**

Watch the Partner Services Process Diagram as it plays.

You will be able to move and examine the diagram after it has finished playing.

Begin



UT Testing Changes

After testing - learner interaction simplified

Passport to Partner Services
Principles of Partner Services

Topic 5: Evidence-Based Research

Applying the Research

In this matching activity, you will read three research findings and decide which presents a relevant supporting argument for partner services in each of three provider scenarios.

Begin by reading the three research points on the right. When you have read all three, click First Scenario.

Research Points

- 1 High HIV infection rate found in partners**
A recent evidence-based review found a median of 8% of notified partners were found to be newly HIV-positive after testing.
- 2 Provider referral increases HIV testing**
Partner services is also an evidence-based intervention. The Task Force on Community Preventive Services (based on a systematic review of scientific evidence) recommended the use of provider-referral partner notification — where
- 3 HIV partner services widely accepted**
A recent systematic research review found a high level of acceptability of HIV partner services among diverse groups. Most potential clients (in 3 studies) indicated they

First Scenario

Passport to Partner Services
Introduction to Partner Services for Partner Services Providers

Topic 5: Evidence-Based Research

Applying the Research

In this matching activity, you will read three research findings and decide which presents a relevant supporting argument for partner services in each of three provider scenarios.

Instructions

Begin by reading the three research points below. When you have read all three, click First Scenario.

First Scenario

High HIV infection rate found in partners
A recent evidence-based review found a median of 8% of notified partners were found to be newly HIV-positive after testing. A prior study of the 10 highest morbidity

Provider referral increases HIV testing
Partner services is also an evidence-based intervention for HIV. The Task Force on Community Preventive Services (based on a systematic review of scientific evidence) recommended the use of provider-referral partner notification — where

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A recent systematic research review found a high level of acceptability of HIV partner services among diverse groups. Most potential clients (in three studies) indicated



UT Testing Changes

Improved tracking of learners' progress

← Topic Menu →
Topic 2, Page 4 of 4

Before

IV infection and their partners and social contacts is guided by

able to all

ceive a diagnosis
fidentially or

, partner services
instead should be

r serostatus

1. Client centered/Client focused
2. Confidential
3. Voluntary and non-coercive
4. Free
5. Evidence-based
6. Culturally, linguistically, and developmentally appropriate
7. Accessible and available to all
8. Comprehensive and integrative

← Topic Menu →
Topic 2, Page 4 of 4

Partner Services Providers

After

S

IV infection and their partners and social contacts is guided by

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- ☒ 1. Client centered/Client focused
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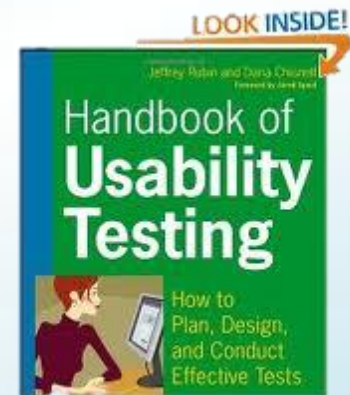


Additional Follow-Up

Re-test to verify changes improve learner experience

Make additional edits to course design—if needed

Include content expert & course designer as observers





The Value of UT for E-Learning

Provides content experts and course developers with valuable information that can:

- Improve course design

- Implement easier navigation of content

- Increase student learning and retention

- Produce greater satisfaction



Questions

