



digitalwave

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Analytical Review

for

Rutgers, The State
University of New Jersey

analysis of www.rutgers.edu

based on an evaluation of content and functionality,
identifying practices known to be detrimental or beneficial
to good user experience for past clients in the
education market and other markets



HOME PAGE / GLOBAL

Recommended Practices:

YES	Item conforms with recommended practice(s).
MOSTLY	Item conforms with minor exception(s).
SOMEWHAT	Conformance is compromised by multiple/significant exception(s).
NO	Item is significantly out of conformance.
N/A	Not applicable due to other factors

Is the **screen optimized for 1024** pixel width?

NO Optimized for 800.

Does the screen **collapse for legible viewing at 800** pixel width?

N/A

Is the content area **centered**?

NO

Is institutional **logo clearly evident** in upper left area of the site?

YES

Does logo/branding conform to applicable **branding standards**?

MOSTLY Space clearance above/below logo is a departure from branding standards.

Do the trappings **establish a look and feel** for the University's online presence independently of the content?

MOSTLY Color scheme and graphics create a distinctive and appropriate environment, but photo imagery is relegated to a single news topic and does not rotate. This limits users to a single and narrow impression of life at the University.

Do all pages include an appropriately located, **prominent search tool**?

NO Search requires click-through to a separate page.

Is home page content **divided cleanly** into areas of like content?

MOSTLY ...

More distinction needed to dissociate the left column features from the area entitled "News..."

Slogan and Apply button are randomly placed in the content area.

Other than these exceptions, the grouping of content is exemplary.



Is all **content introduced in the upper area** of the home page (users do not have to scroll to find new content types)?

NO Initiatives, Slogan, Apply button, and part of the main menu (!) require scrolling.

Observations & Discussion:

The screen optimization is not conducive to the vast majority of users viewing the site at 1024 pixel screen width or greater. The contents of the site are truncated after 750 pixels or so. While the site should continue to be usable and viewable at an 800x600 resolution, the contents should be scalable to accommodate a more optimal viewing experience for larger screens.

Subtext for logo used on sub-pages is not sufficiently readable at that size.

Home page content is relatively well segmented and clean. It would benefit from improvements in labeling.

Home page content seems to be fresh and topical.

Much of the home page content is pushed down off the page as a result of vertical space being devoted to both the large branding area and the featured news story.

Recommendations:

- ▶▶ **Design and configure the site for optimal viewing at 1024 pixels wide,** collapsible for reasonable/legible viewing at 800 pixels wide. Center the live area of the site to have equal margins to the left and right when viewed at higher resolutions.
- ▶▶ **Introduce separate branding standards for web usage** of the logo and other branding elements (in an effort coordinated with the site redesign).
- ▶▶ **Introduce positioning-sensitive imagery within the interface trappings, or “rotate” the images** to change periodically, so that the single featured news story is not the only prominent imagery.
- ▶▶ **Introduce a simple keyword search tool on all pages,** linking to an advanced search option, as detailed below under “SEARCH.”
- ▶▶ **Rework home page layout to consume less vertical space in the upper area,** adding categorical headers and possibly reducing the length of the content entries to further simplify the home page.

NAVIGATION

Recommended Practices:

Is there a **clear and prominent menu hierarchy**, beginning with a clearly distinguished main menu?

SOMEWHAT ...



Navigation is successfully limited to a main menu, utility menu, and list of campus areas. However...

The utility menu (*Visit Rutgers, etc., 4 items total*) could be mistaken for the main menu (*About the University, etc., 16 items total*), due to the latter's unusual right-side location.

Due to its presentation within the same box, the campus menu obscures the main menu and pushes it so far down the page that some of its items require scrolling.

▶▶ *The difference in color is not enough to distinguish the gateway menu from the main menu. In fact, color should never be used to distinguish types of hyperlinks (all hyperlinks should have the same color).*

Is the **main menu short** (9 items max.) and limited to a logical groups of categorical information?

NO Sixteen items is entirely too long for a main menu. Because many of the topics do merit high-level positions, it may be challenging to get this down to a more user-acceptable number.

Is the **menu applied with consistent style** and protocol throughout the site?

NO ...

The menu is not consistently viewable at lower levels of content.

There is no consistent protocol associating lower levels of content with the first level of navigation.

Do menu **destinations conform to a single hierarchy** of like pages within a common environment?

SOMEWHAT Some menu items lead to new environments, many lead to pages that displace the main menu with their own sectional menus. These menus vary significantly in style and protocol from one area to the next.

Are navigational cues (menu states, breadcrumb trails, etc.) provided to **indicate to users which page is currently being viewed** and orient them to the general hierarchy?

NO ...

The site does not include breadcrumb trails.

Menu items do not include "active" states.

Menus come and go at random, resulting in lack of continuity.



The only link from campus sites to the main university site is an undistinguished “UNIVERSITYWIDE” link in the campus menu at the top of the page.

- ▶▶ *Because this link is not included in the main site, it is possible that it will go unnoticed by users coming from the universitywide site to a campus site.*

Observations & Discussion:

The principal issue inhibiting navigation is the lack of an omnipresent, coordinated menuing system. Users count on having a menuing system throughout the site experience, telling them what page they are on, what section they are in, where the page is in relation to the overall hierarchy, and how to move laterally and vertically within that hierarchy. In this site experience, the menus disappear and reappear with only a certain amount of regularity. Not only do the protocols fail to indicate a user’s place in the hierarchy, but they do not give any clues as to how to find the menus that the users may have come to count on. It is likely that users are likely to feel stranded.

The Alphabetical organization of the main menu is not likely to enhance navigation. The menu contains a large number of menu items, requiring users to read the menu thoroughly rather than glance at it. Many of the items are named in an unintuitive manner (a new user won’t expect to find “Serving New Jersey” under “S” for instance). Once they fail to find such an item under a more expected term (e.g. “community outreach”), they may stop reading.

The right side location of main menu makes it nearly impossible to offer adequate, intuitive lower-level navigation. The inclusion of lower-level menus is made much more difficult by the fact that a right-side menu will tend to be interpreted as subordinate to either a top or left-positioned menu. This leaves in-page, portal style linking as the only available option, and this complicates navigation of the site significantly as these menus are displaced/replaced by the content itself.

Contents of utility menu in the upper right of the page change from the home page to other pages of the site. Because the style of this menu does not change, there is an indication that the content does not change, leading to possible oversight of important menu items, including the universitywide home page.

Recommendations:

- ▶▶ **Introduce a menuing system that is consistently applied throughout the site.**
- ▶▶ **Exclude menu items that link to separate navigational experiences, pop-ups, downloads, etc.**
- ▶▶ **Dramatically reduce the number of items in the main menu**
- ▶▶ **Organize the main menu based on likely order of interest, importance, etc. rather than alphabetical order.**
- ▶▶ **Relocate the main menu to appear across the top or down the left side of the page.**



If fly-out menus are to be considered, an across-the-top orientation is preferable for usability reasons.

▶▶ **Introduce visual indicators to indicate each page’s location within the hierarchy, including:**

“Active” states to distinguish current menu items from the rest of the menu

A breadcrumb trail showing the path from the home page to the current page

Page headers

LINK STYLES & BEHAVIORS

Recommended Practices:

Are styles applied consistently and appropriately to hyperlinks?

NO ...

In lists and some content areas, hyperlinked text is black (same as regular text) but red with underscores on mouseover.

▶▶ *The color red is less indicative of “clickability” than blue-family colors.*

▶▶ *Red html text is associated with errors and should be avoided.*

“The red text makes me feel as if I’ve done something wrong.”
(Participant in 2006 End User study for a Digital Wave client, paraphrased)

In menus, the mouseover color is teal rather than red. In the footer, links are red before mouseover. In many content areas, hyperlinks are blue with underscores before mouseover.

Are users alerted to non-contiguous links, which take them outside the site hierarchy and/or lead to pop-ups, downloads, etc.?

NO ...

Use of pop-ups is prevalent.

Many sites lead to new sites without indication.

Are hyperlinks clearly distinguished/identified?

NO

Contextual links look the same as non-linked text until user places pointer over them.

Is regular text free of styles that may be indicative of hyperlinks?

NO

Styles used to indicate hyperlinked text (see table below) are also used for other purposes such as emphasis for non-linked text, rendering them unreliable as hyperlink indicators.



Observations & Discussion:

Many links are not sufficiently identified. All links in main body of home page are black with no underscore. There is no visual indication as to which text is linked and which is not. Requiring the user to mouseover the entire screen to discover what text is linked is not acceptable.

Links throughout the site should be consistent in style. The color used for links should not be used for other purposes such as unlinked headings, alerts, emphasis, etc. While the most commonly accepted link style is blue text with underlines, it is acceptable to use another color other than blue and to underline on mouseover instead of by default, so long as the color and decoration provides sufficient contrast from surrounding content and is *consistently* and *exclusively* applied to links. The following table shows various link styles with corresponding mouseover effects as used in the Rutgers site.

Link*	Mouseover	See: http://www.rutgers.edu/
Link**	Mouseover	See: http://www.rutgers.edu/
Link	Mouseover (no change)	See: http://www.rutgers.edu/
Link	Mouseover	See: http://www.rutgers.edu/
Link	Mouseover (no change)	See: http://search.rutgers.edu/
Link*	Mouseover	See: http://ruweb.rutgers.edu/aboutru/colleges.shtml
Link	Mouseover (no change)	See: http://ruweb.rutgers.edu/aboutru/colleges.shtml
Link	Mouseover (no change)	See: http://ruevents.rutgers.edu/events/
Link	Mouseover	See: http://ruevents.rutgers.edu/events/
Link***	Mouseover	See: http://ruevents.rutgers.edu/events/
Link	Mouseover	See: http://ruevents.rutgers.edu/events/
Link	Mouseover (no change)	See: http://ruweb.rutgers.edu/copyright.shtml

*The primary text style for non-linked text content throughout the site. Often used with graphic bullets

**Used frequently as a non-linked subhead style as on <http://ruweb.rutgers.edu/news-media.shtml>

***Also occasionally used as a non-linked subhead style

These types of inconsistencies and multiple uses of the same styles for different purposes will diminish the user's ability to correctly identify a link.

The vast majority of the content linked from the core site is located on various sub-sites and individual campus sites. This is not inappropriate, given the fact that the primary role of the core site is that of a portal to the information contained on these other sites. That said, the user should be given more indication when a link will take them to a new web site or menuing experience vs. keeping them in the same trappings and main menu.

Recommendations:

- ▶▶ **Adopt a single hyperlink style with a single corresponding mouseover effect, for use in the body text (light background) content areas.**

A second style may be introduced for light-colored text appearing on dark backgrounds.

If environmental trappings, such as variance in background colors, necessitate more variations, they should be undertaken judiciously.



- ▶▶ Distinguish, through context and labeling, links that lead to different environments, downloads, etc. as well as specific individual campus sites.

ACCESSIBILITY / SEO

Recommended Practices:

Do graphics and images include ALT text attributes for interpretation by screen readers?

SOMEWHAT ...

No ALT text in navigational menu.

The text in the navigational menus is created as artwork. See discussion below.

Limited descriptions for photos and graphics

For example, in the main photos on key landing pages such as <http://ruweb.rutgers.edu/about-the-university.shtml>, the ALT text is the same as that of the section header (“About the University” in this example). To screen readers, the header and the photo are indistinguishable from each other.

Inconsistent use of ALT text in headers

ALT text in page headers appropriately repeats the exact wording of the artwork, although the ALT text for the EMPLOYMENT OPPORTUNITIES header, and its corresponding photo, read “Academics.”

Other text, such as the subheads on the home page, do not include ALT text.

Is text resizable?

SOMEWHAT ...

As detailed above, the menus are not resizable because they are rendered as graphics.

- ▶▶ *The use of html-generated text is far preferable to the use of graphics as it allows visually impaired users to resize the text for easier reading.*

Throughout the standard text pages, body text is resizable.

Interestingly, in the non-standard Alumni section, the opposite is true: the navigational menu is html-generated and resizable, but much of the text



is fixed in size. (The Office of the President includes resizable text and resizable menu.)

Does page titling support search engine optimization?

SOMEWHAT ...

The title property of each page begins with "Rutgers, The State University of New Jersey," followed by a unique page title, with a hyphen separating the two portions. While this looks good in the window trappings, leading with the full name of the institution rather than the individual page's title can make it difficult to scan search results, since the unique portion of each result title appears *after* the ubiquitous institution name. This factor is equally important in the case of bookmarking, as users who bookmark multiple pages on the site will be left with a list of bookmark titles that are identical for the first 45 or so characters. Both bookmarks and search result titles are often cut off after some number of characters, so again, it is important to lead with the unique/identifying portion of the title, following with the institutional name.

From an external search engine (e.g. Google) perspective, the page titles are sufficiently well-formed and consistent to promote high relevancy rankings.

In the case of screen reader devices or software, the page's title is likely to be the first descriptive piece of information encountered on the page, and so the unique/identifying portion of that title should come as quickly as possible.

Observations & Discussion:

It is extremely important that proper ALT text attributes be provided in cases where text is rendered graphically, especially in navigational tools such as the main menu, so that assistive devices such as screen readers will be able to interpret the navigational options. As the main menu currently stands, it is unreadable using a screen reader.

Linked thumbnails for home page news items are separate links from the headlines themselves. For accessibility purposes, the thumbnail image and headline text should all be surrounded by one individual link. This will have the added effect of triggering the mouseover behavior for the text portion of the links to help reinforce the fact that clicking on the thumbnails will link users to the story.

Recommendations:

Extend the use of ALT text throughout the site to associate all graphic files with text equivalents and/or descriptions of content as applicable to context.

Avoid graphic text and fixed-size text, allowing users to re-size as much content as possible. Where graphically generated text is used, include verbatim ALT text.

Where illustrated news blurbs are used, **group text and images in a single hyperlink anchor tag**. This will avoid redundancy and confusion for users with assistive devices.



SEARCH

Recommended Practices:

Do search results provide sufficient information to identify the topic, content, and location of the returned result?

YES Pre-head identifiers, short extractions, and breadcrumb trails are provided.

Is the ability to provide an additional search provided with the search results?

YES ... although it may be preferable to include more search options.

Are search results easy to browse?

MOSTLY Forward/back links and individual return page links are provided, but they are placed at the bottom of the results, such that users may not know they are there. Total number of results and number of results per page are also displayed.

Does the interface pick up familiar elements from Google to capitalize on recognition?

YES The search tool is Google-driven, and its basic components are preserved in a fashion that should be familiar to users.

Observations & Discussion:

Search is compromised by multiplicity of options. People are accustomed to making an immediate search using a simple search interface. The default “Advanced” search on <http://search.rutgers.edu/> works against this familiar approach by indicating that users must first choose among various non-intuitive search options rather than defaulting to a simple keyword search.

The keyword is further complicated by the need to select “Search for: websites.” People are not likely to think of themselves as searching for web sites, so much as looking for information within the Rutgers web presence.

Even on the website searches, there are several different clusters of sites you can search – Universitywide, student pages in New Brunswick, student pages in Newark, student pages in Camden, etc. Users may not know which cluster they should select if they are looking for something very specific.

In short, a great deal of space is allotted, and potential confusion introduced, for functionality that could be represented as a simple key word search.

The Rutgers logo and design trappings in the search results screen have not been replaced with the new branding.

The tab-like styling of the campus links in close proximity to the SEARCH RESULTS header implies that there may be tab options within the search tool – i.e.



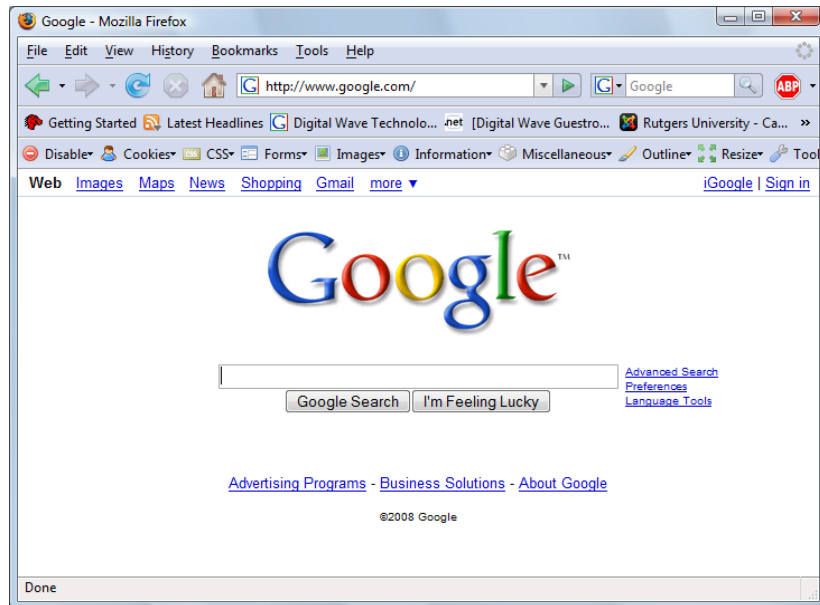
by clicking on Camden, a user could search for Camden information. This may be moot because the design seems to be a carryover from a previous interface.

Recommendations:

Streamline the search interface...

Place a simple (universitywide) keyword search tool (not just a link) on all pages, with a link to advanced search (alternatively, advanced search can appear once a user has conducted an initial search).

Apply information design to improve/simplify the presentation of the search options in this advanced view. One option might be to use Google's method for paging between different types of searches.



Another option might be to create a single common search, but this may be too challenging because it would require generating a “crawlable” web structure from databases that aren't designed for browse functionality (e.g. search buildings and facilities, search people).

FUNCTIONALITY

Observations & Discussion:

The **site map appears out of date/incomplete**, and includes links to information not technically in the core site

Site content is spread across more than one domain (www.rutgers.edu and reuweb.rutgers.edu) for no clear reason

CSS file seems to be on a remote server, causing the CSS to load after the content has begun loading, making the page look incomplete.



Recommendations:

Update the site map to reflect current structure and functionality of the site and restrict its content to the main site.

Consolidate the contiguous body of content under a single domain:

www.rutgers.edu

Relocate the CSS file for faster load time.



UNIVERSITY RELATIONS CONTENT AREA

Observations & Discussion:

The University Relations area does not set forth a clear hierarchy of content resident to the section. The main menu mixes resident pages “Office of the Vice President,” “Community Affairs,” “Creative Services,” and “Strategic Communications” with links such as “Campus Information,” “RU-tv Network,” and “Media Relations,” which, although they are related to UR, are not located within the section.

As a result, the area is something of a cross between a resident section and a portal to other web sites, and users must adjust their perspective from page to page to avoid becoming lost or disoriented.

Although the links on the home page are all related to UR and communications, their relevance of the content selections is not entirely clear: are these services offered by UR or merely topics relating to UR? Links such as “Speaking on behalf of Rutgers” leads to what appears to be parallel sections with their own home pages, and it is unclear whether these are UR sub-topics, programs, or departments. Conversely, the style of the page headers on the “Rutgers Communicators Network” and most of the Creative Services pages make them more clearly subordinate topics under UR.

Users must piece together a profile of the department itself from the mission statement, the directories, and its programs and units by example. This misses an opportunity to offer a more in-depth profile of the departments and its services.

Publishing venues, such as RU-tv and Rutgers Magazine, relate to the university as a whole and should not be relegated to the section of the department responsible for producing the content. Although it is appropriate to represent such topics as services offered by, or associated with, the department, their actual content should be presented in a separate, or more global, environment, such as that of FOCUS magazine.

Inclusion of topic-specific contact information is very beneficial to users. However, due to its location far down the page, it may go unnoticed.

Recommendations:

Introduce a hierarchy of content that groups “about us” information and service information, and presents program and unit information in a way that gives an effective general overview and links logically to applicable sub-sites located outside of the section.

Include navigational protocols, especially a sub-menu of resident content, that clearly demonstrate this hierarchy and these relationships among the types of content.

Provide “about” type information about publishing venues within this hierarchy, but relocate the published content, such as magazine articles, to serve the University site as a whole and place them in freestanding graphic environments.

Perhaps the greatest challenge in reworking the UR site lies in isolating information about the department from information and resources serving the University in general.

Increase prominence of topic-specific contact information.



NEWARK CAMPUS CONTENT AREA

Observations & Discussion:

The home page animation exhibits a feature popular with students – that of a series of photographic images that change periodically while the page is being viewed. However...

The pace of changeover should be slowed down quite a bit.

The series ends unexpectedly, leading to a possible inference that the flash has stopped working.

The home page does not clearly establish a main menu of content.

The topics are represented in the content area in a site-map style.

Although this treatment can add value in guiding users, it only does so if it adds information such as short blurbs describing the section.

Such a treatment can be offered in addition to a main menu but should never be used in place of one.

The same topics are picked up in a much more appropriate menu-type treatment on sub-pages. However...

Menus should not change in appearance or content from one level to the next.

Many of the (21) topics on the home page are omitted from the sub-page menu.

Without a clearly defined main menu, the audience portals seem to serve as the main menu.

This is reinforced by the fact that audience-based home page links are added to the topics of the pages accessed via the left side menu. It implies that each of the sections has its own page for "About R-N," etc. when in fact the appearance is created by the addition of a section specific link (using cookies) to otherwise identical content.

The audience-specific pages have a complex array of menus, including the two aforementioned menus, plus a top menu that is offered on some – but not all – of the areas, whose location and style changes for the media section only, and whose position in each hierarchy is not clear.

Multiple lists of links, even the occurrence of two "quick links" menus on a single page in one case, make for highly cluttered pages.

Many featured links, such as the Info Packet Creator and video links, seem to be placed at random. On the otherwise relatively well organized Prospective Students page, their location requires users to scroll to find them.



The obscure “more links” option takes users to even longer lists of links. Potentially useful tools such as an alphabetical list of links and a section-specific search tool are hidden by the obscurity of the link’s wording and position.

Most of these factors could be greatly diminished by the introduction of sectional sub-menus.

The prominent link to WEBMAIL may alienate outside users who find, upon following the link, that they do not have access to the destination.

The fixed width site changes from being centered on the page (home page only) to being anchored to the left side of the screen (sub-pages)

Recommendations:

Slow down the changeover from one home page image to the next, and return to the beginning upon completion. Optionally, add user controls so that they can choose the image manually.

Rework the site structure to make audience portals independent of the main menu items. Include sectional submenus within all sections to reduce the dependency on links in the home page content areas. Create a clear content plan for each area in the site, and adhere to it.

Establish a single, manageable protocol for related/quick links pertinent to each section.

Identify the webmail link as a user-restricted area, and move it to a less prominent area such as the applicable audience gateways (if it must be on the home page, it should be in the footer).