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*An Evaluation on  
the Web Page Navigation Tools In University  
Library Web Sites In Turkey*



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# *Definition of Web Navigation*

It is a set of methods that are used by users to access to information on a web page.

## *In other words;*

It is a set of activities that are carried out by users to meet their own information requirements on a particular web page (Farkas & Farkas, 2000).

Web navigation systems and navigation tools are the most important factors that determine the usability of web page (Galitz, 2007).



# Web Usability

## Usability

*“...is the degree to which something - software, hardware or anything else - is **easy to use and a good fit for the people who use it**” (UPA, 2009)*

*“...is a quality attribute that assesses how **easy user interfaces** are to use. The word "usability" also refers to methods for improving **ease-of-use** during the design process” (Nielsen, 2003).*



# Web Navigation & Usability

*Web Navigation systems have a major role for the usability of a web page. It deals with the designing process of the web page.*

*In the elements of the usability, Navigation system design takes the second phase after the visual design of web page and it facilitates user movements through the information architecture (Garrett, 2000).*



**(Source: Krebs, 2008)**



# *Aims of The Web Navigation Tools*

*- Providing access to the content of web page by using the shortest way*

*- Showing users...*

*which page they are visiting*

*which page they are coming from*

*what can they do on the web page by using the easiest way*

*(Galitz, 2007)*



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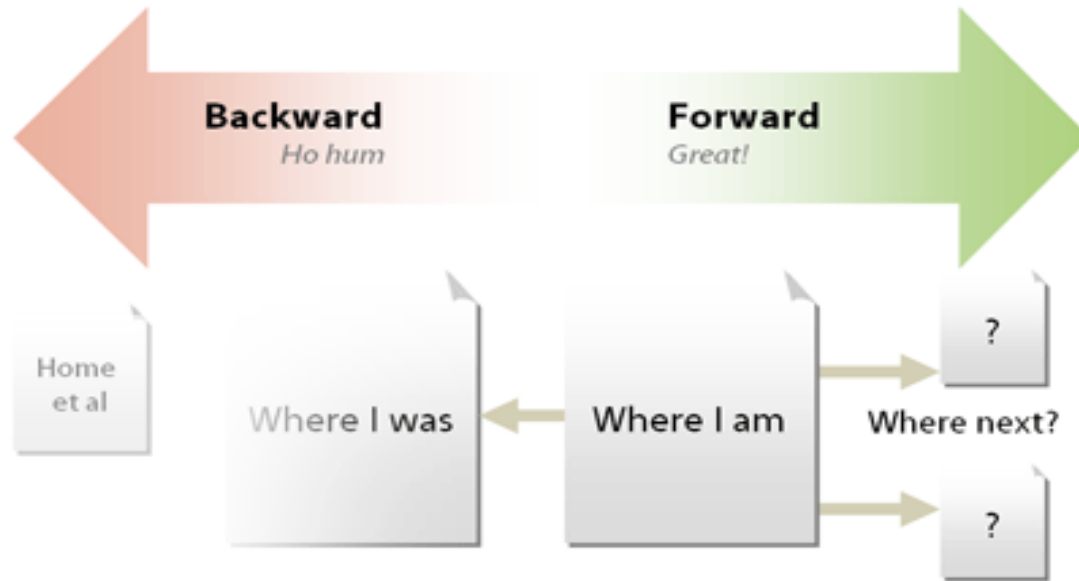
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# Web Navigation Systems

According to these aims

Navigation systems are also described as a roadmap (Timberlake, 2007).



(Source: Barrett, 2008)



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# *Why Web Navigation is Important?*

Because;

- Today, users are visiting the web page in a less than 5 seconds.
- They tend to drop out as soon as possible after finding information that they need (Townes, 2007; Uçak & Çakmak, 2009 p.280).

Navigation systems and search box of the web pages provide users access to the right information at the shortest time.





# Why Web Navigation is Important?

Researches that conducted last decades show that one of the problems about finding information on the web is complexity of web pages and their navigation systems.

Example research; *GVU WWW Survey*

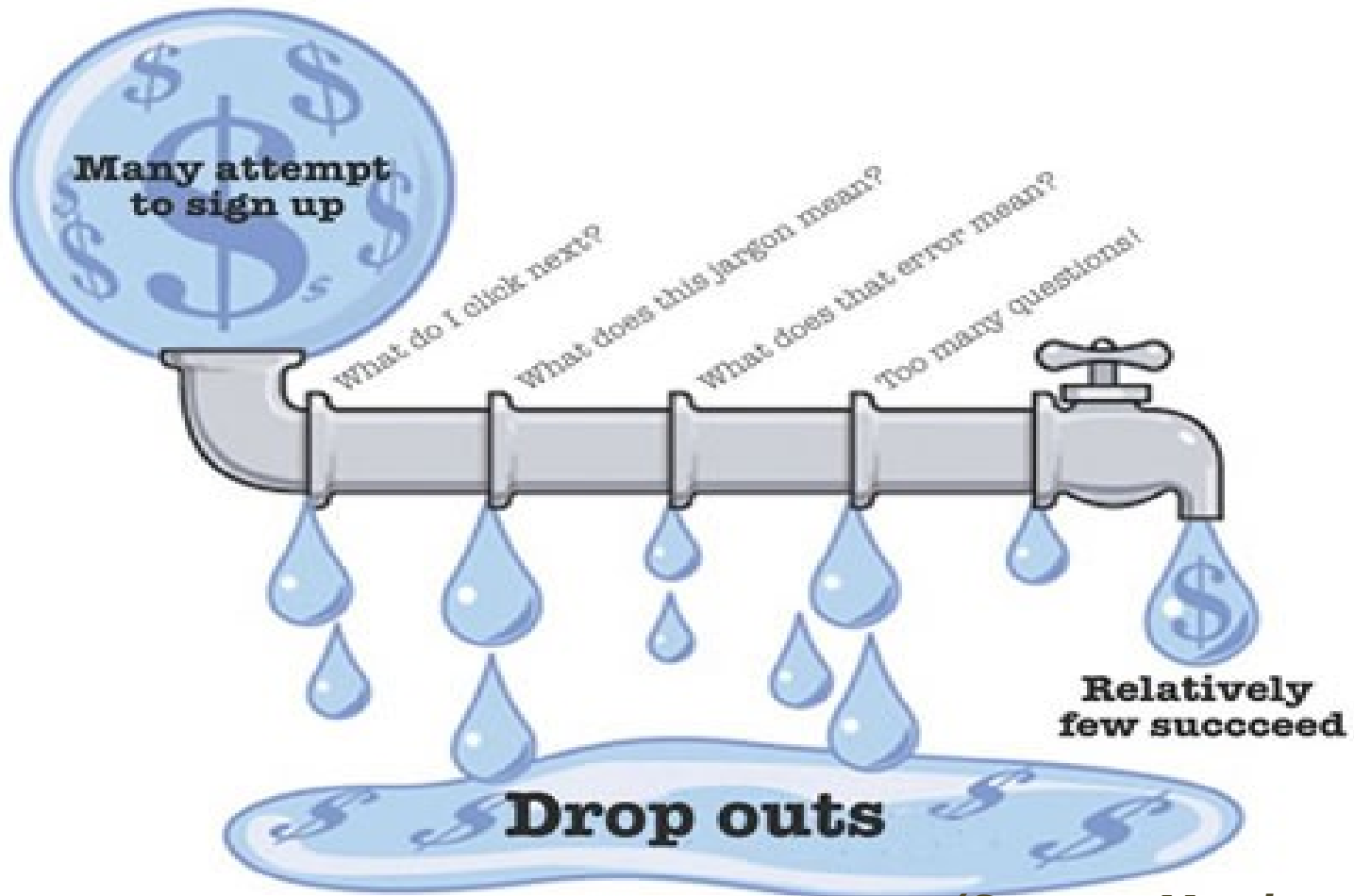
conducted in Europe and U.S.A continents  
in 1997

Results show that the most important problems on the web that effect users.

1. Privacy (30, 5 %) *About content of the web*
2. Cencorship (24, 2 %) *page*
3. **Navigation Problems (16,65%)** *page*  
(*GVU's Eight WWW Survey, 1997; Keyrnin, 1997b*) *About design of the web*



# User Interactions with Web Pages



(Source: Mardens, 2007)



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# *Characteristics of Ideal Web Navigation Systems*

Ideal web navigation system on the web page should be...

- *easy to access*
  - *compatible with different web technologies and web browsers*
  - *understandable menus and links*
  - *understandable icons (if used)*
  - *appear in the same place of the all pages of web site*
- (Kyrnin, 1997a).*



# *Types of Web Navigation Systems*

There are many studies that are reviewed and classified web navigation systems

One of these studies , grouped web navigation systems in three phases. These phases are

- *Structural systems*

*(Global Navigation Systems, Local Navigation Systems)*

- *Associative Systems*

*(Contextual Navigation Systems, Footer Navigation, Quick Links, Adaptive Navigation)*

- *Utility Systems*

*(Kalbach, 2007)*



# *Types of Web Navigation Systems*

Another study that is grouped these systems in five phases and it was carried out by Galitz in 2007.

These systems are almost similar with Kalbach's classification. According to Galitz (2007); web navigation systems consist of

- *Global Navigation*
- *Categorized Navigation*
- *Embedded Links*
- *Secondary Navigation*
- *Content Lists*

*(Galitz, 2007)*



# *Global Navigation Systems*

It is a whole of systems or menus that provide access to all important points of the web page under the general categories (Rosenfeld ve Morville , 2002; Timberlake, 2002).

- This systems can be found in all pages of the web page.
- Provide effective usage of the web site.
- Present whole content of the web site to users



# *Global Navigation Systems*

- Global navigation systems show users which page they are visiting and which pages they can visit (Rosenfeld & Morville, 2002).
- Global navigation systems also can show users which pages they visited in the web site with breadcrumb navigation systems (Powazek, 2006)



# *Global Navigation Systems*

These tools are generally horizontally designed under the banner of the web page. But they can be designed on the left or right sides of the web page vertically.

But in terms of usability, it is suggested that they should be designed horizontally and found at the top of the page under the banner of web page (Galitz, 2007).





# Local Navigation Systems

Consist of the links or submenus that provide detailed access to particular web page of the web site.

It is a navigation system that created for organizing information on the web page under the determined categories (Timberlake, 2002).

*They can be designed on the left or right side of the web pages (Hasegawa, 2006).*

*They can show diversity in all pages of the web site*



# Contextual Navigation

These are the links that provide connection to the related pages . They are generally text form. And designed in the content of the web page.

**Welcome to Wikipedia,**  
the free encyclopedia that anyone can edit.  
3,131,464 articles in English

[Overview](#) · [Editing](#) · [Questions](#) · [Help](#)

**Today's featured article**



The **Pennsylvania State Capitol** is the seat of government for the U.S. state of Pennsylvania and is in downtown Harrisburg. The current capitol was designed in 1902, in a **Beaux-Arts** style with **Renaissance** themes throughout. The capitol houses the chambers for the **Pennsylvania General Assembly**, made up of the **House of Representatives** and the **Senate**, and the Harrisburg chambers for the **Supreme Court of Pennsylvania**, as well as the offices of the **Governor** and the **Lieutenant Governor**. It is also the central building of the **Pennsylvania State Capitol Complex**, which includes state government buildings in Harrisburg and throughout the rest of the state. The seat of government for the state was originally in **Philadelphia**, then moved to **Lancaster** in 1799 and finally to Harrisburg in 1812. The current capitol, known as the **Huston Capitol**, is the third state capitol building to be in Harrisburg. The first, the **Hills Capitol**, was destroyed in 1897 by a fire and the second, the **Cobb Capitol**, was left unfinished when funding was discontinued in 1899. **Joseph Miller Huston** designed the current capitol, dedicated in 1906. **T** referred to as a "palace of art" because of its many sculptures, murals and stained-glass windows. (**more...**)

Depth featured: [More of Topic](#) · [Media Dumps](#) · [User Screens](#)



# *Quick Links and Footer Navigation*

Quick links provide access to web pages faster and easier by a drop-down menu (Kalbach, 2007). These links automatically direct users to the particular web page that they want to visit.

Footer navigation, these systems are different from other navigation systems. They are designed in text format generally and they provide access to important points of web site.





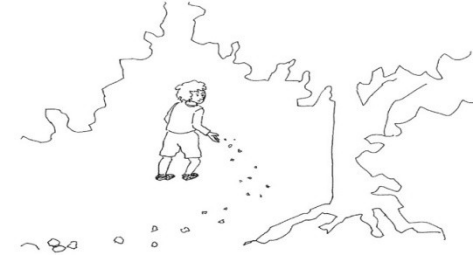
# *Utility Navigation Systems*

These systems help users to use web page easily. These systems are;

- *Language tools*
- *Site maps*
- *Search box*



# Breadcrumb Navigation Systems



Breadcrumb term comes from the story of *Hansel and Gratel*

*“Hansel and Gretel are taken deep into the forest in the hope they will not find their way out . However, clever Hansel has left a trail of breadcrumbs to show their return path.”*

Breadcrumb navigation systems inform users which page they are visiting and which path they used before coming to recent page.

*Show users where they are in the web site*

*Provide users to returning back to visited pages.*

*Help to determining web site hierarchy.*

*Generally works as a secondary navigation system*

*(Nielsen, 2007)*

**Home page > Section page > Subsection page**



# *Methodology*

In this study data were obtained from the library web pages of higher education institutions in Turkey.

In the first stage of the study higher education institutions are grouped into two parts according to The Council of Higher Education (YÖK) universities classification.

In the second stage of the study, library web pages of higher education institutions in these groups were visited and their navigation systems were examined in terms of web usability factors. The data were collected and analyzed as a result of the examinations of web pages



## *Findings*

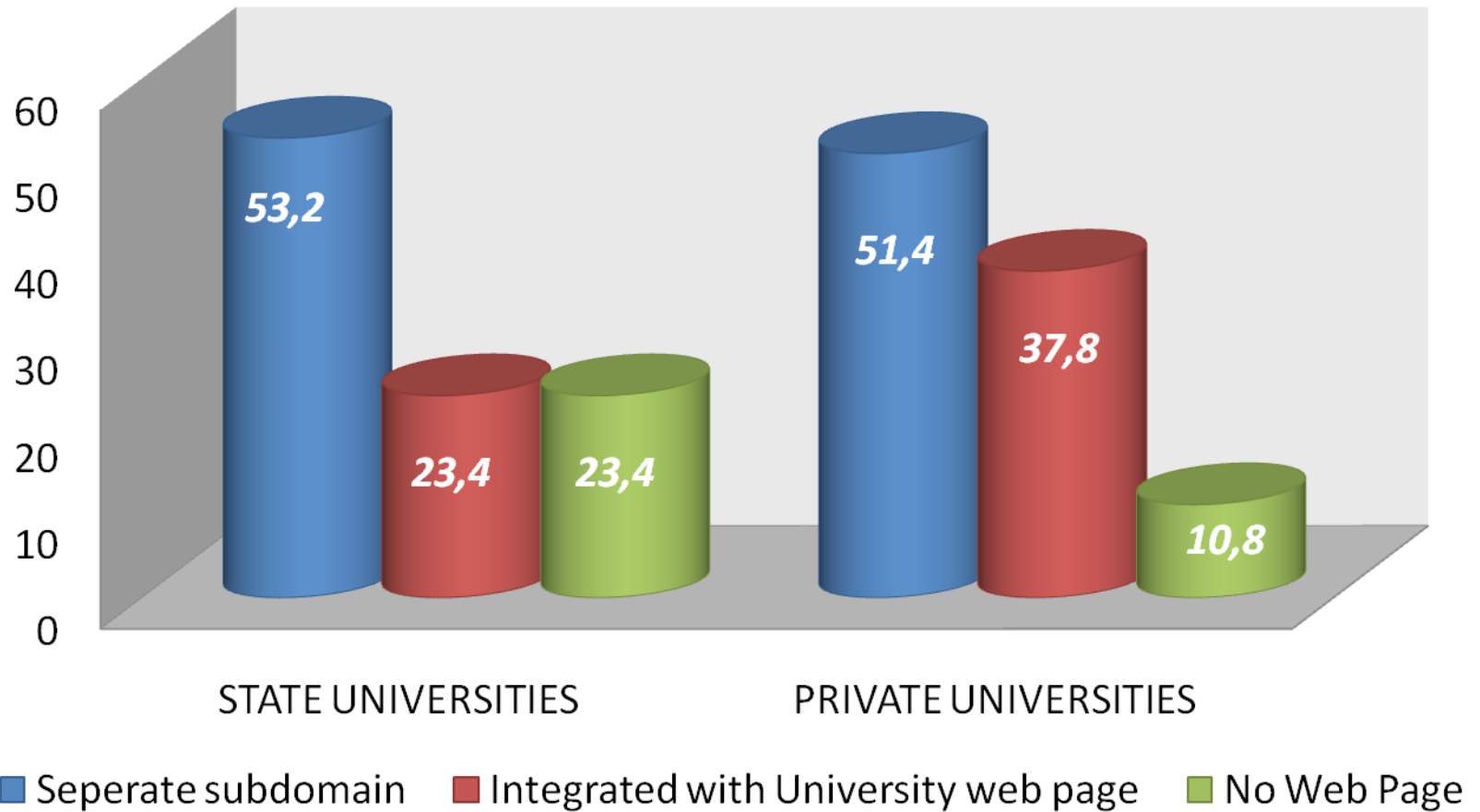
In this study, first of all, domain names of university library web pages are analyzed.

According to this analysis 50 of 94 state university libraries have a web page as a separate subdomain link. 16 State universities has a separate library web page although their links are integrated with university web site.

19 of 37 private universities have a web page as a separate subdomain link.



# Domain Names of Web Pages of University Libraries



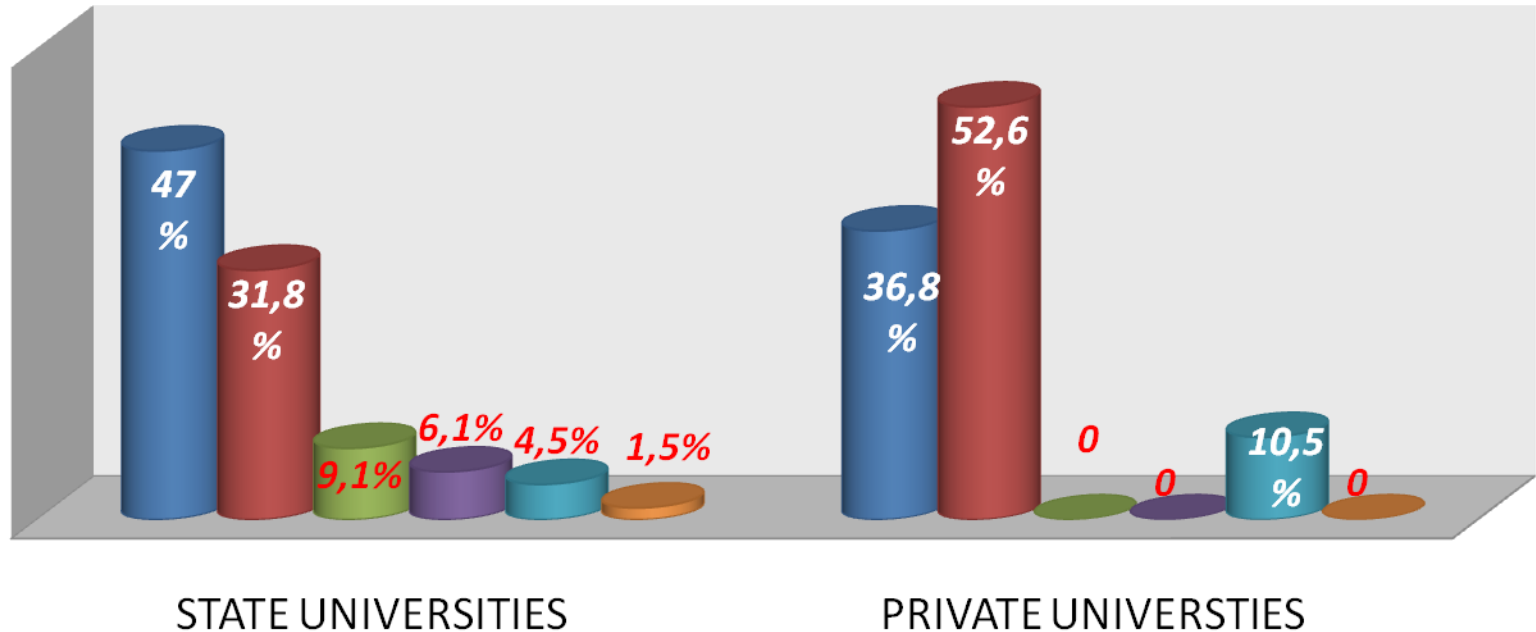
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## Global Navigations in Library Web Pages



■ Left side of the page

■ Right side of the page

■ Head and left side of the page

■ Head of the Page

■ Left and Right sides of the page

■ Null

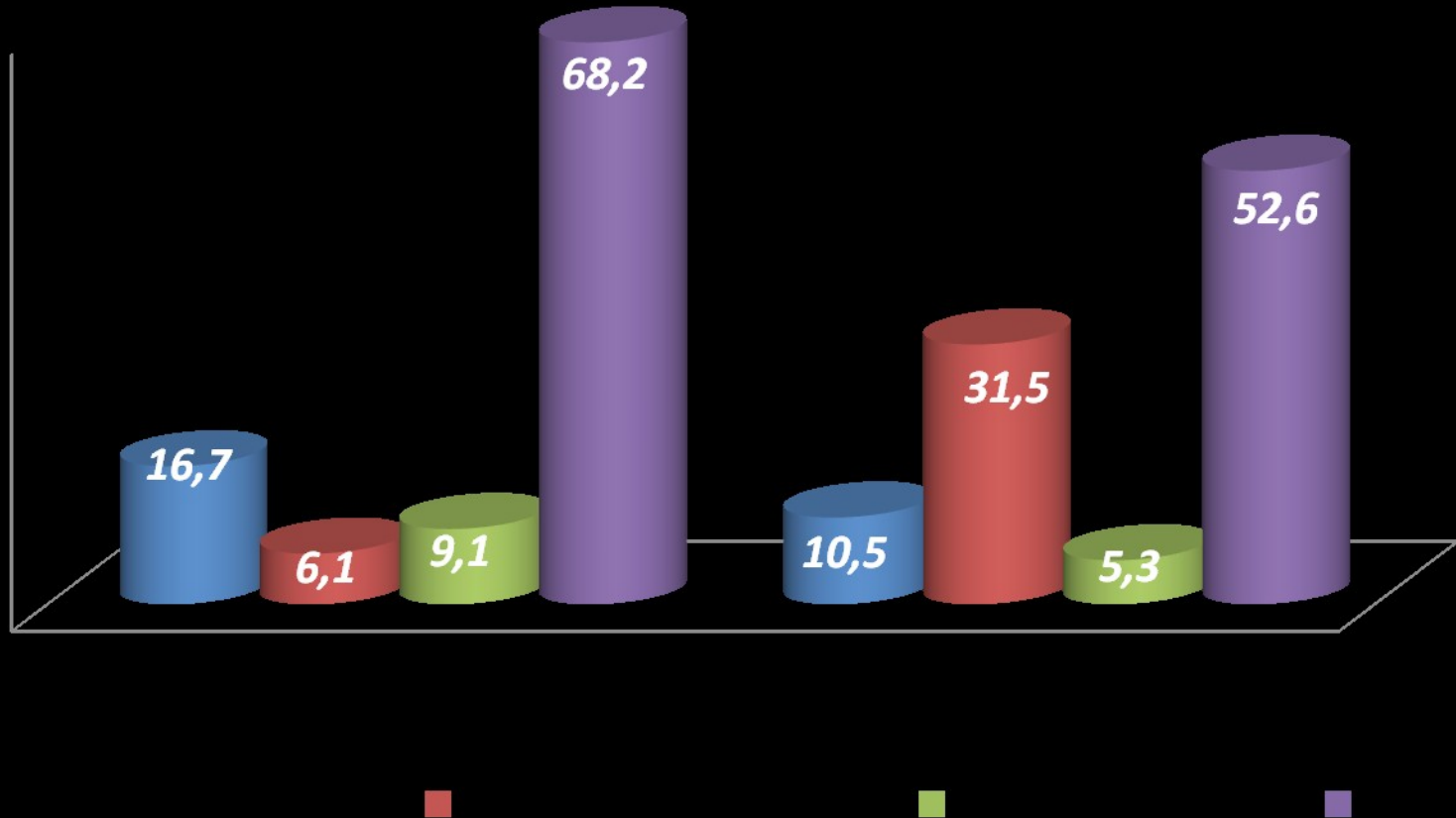


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# Local Navigation Systems



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# *Findings*

## *State Universities*

21,2% of state universities have a breadcrumb navigation

27,3% of them have a site map as a utility navigation

27,3% of them have a footer navigation

38% of them have a top navigation

47% of them have a search box or quick search capabilities on the homepage.

72,7% of them designed only Turkish language



# *Findings*

## *Private Universities*

10,5% of private universities have a breadcrumb navigation

21,1% of them have a site map as a utility navigation

26,3% of them have a footer navigation

73,7% of them have a top navigation

63,2% of them have a search box or quick search capabilities on the homepage.

94,7% of them designed Turkish and English language



# *Results and Recommendations*

Findings indicate that;

Most of the state university library web pages consist of an only global navigation system, That is designed generally left side of the web page.

Most of the web pages in state universities designed only Turkish language

There are many state university library web pages that are designed according to usability tests (METU, Gazi University, Hacettepe University Libraries)



## *Results and Recommendations*

On the other hand,

Most of the private university library web pages designed with English and Turkish languages

They should be improved in terms of navigation tools like local navigation, breadcrumb navigation, sitemaps and footer navigation systems.

According to findings, it can be suggested that,

These web pages in each university types should be developed in terms of usability factors, user behaviors and navigational systems



## *Results and Recommendations*

Developments should be carried out according to usability tests by using techniques like card sorting and other techniques.

These tests should be carried out at regular intervals due to changes in user expectations.

Novice and expert users should be taken into account together while navigation systems are designing. This will be very helpful to create a usable menus and navigation systems for these web pages.



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*Thank you* 😊

*Grazie Mille* 😊



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