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## Exploring the Usability of the Pakistani Medical Colleges/ Universities Websites

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*Abstract* - Websites have a great role in the field of internet. Usability has also a precious value in navigating the websites. The objective of this paper is exploring the usability of Pakistani Medical Colleges/Universities and providing the idea of developing the websites in such a way that it fulfilled the user requirements and are easy for the user in using/accessing these sites. Different parameters were checked regarding the usability in the websites of different Medical Colleges/Universities in Pakistan. It was analyzed that these Colleges/ Universities have some gaps in light of usability not following the rules. The usability of can be enhanced by applying the one fixed rule for every aspect so that the user can meet every task easily with no boring exertion and perplexity. The rules should be from government side limiting the sites to be restrictive to these rules entertaining the every type of user.

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*Strictly as per the compliance and regulations of:*



# Exploring the Usability of the Pakistani Medical Colleges/Universities Websites

Muhammad Shahid Khan<sup>α</sup> & Muhammad Abid Khan<sup>σ</sup>

**Abstract** - Websites have a great role in the field of internet. Usability has also a precious value in navigating the websites. The objective of this paper is exploring the usability of Pakistani Medical Colleges/Universities and providing the idea of developing the websites in such a way that it fulfilled the user requirements and are easy for the user in using/accessing these sites. Different parameters were checked regarding the usability in the websites of different Medical Colleges/Universities in Pakistan. It was analyzed that these Colleges/Universities have some gaps in light of usability not following the rules. The usability of can be enhanced by applying the one fixed rule for every aspect so that the user can meet every task easily with no boring exertion and perplexity. The rules should be from government side limiting the sites to be restrictive to these rules entertaining the every type of user.

## 1. INTRODUCTION

Usability is a renowned aspect that analyzes the easiness of use of the interface for the user. Followings are the components that can easily explain the term "Usability" [1].

- Learnability is associated with encountering the plan for the first time; it will be effortless for the users to execute the crucial tasks.
- Efficiency is how swiftly a user can come across the diverse tasks after learning the design.
- Memorability is to which extent the user has the skill to perform different errands easily which he had encountered few years ago.
- Errors are how many mistakes made by the user, how scrupulous they are and how simple they can be recoverable.
- Satisfaction is to what confines the design is gratifying?

Usability plays a very important role in the field of web e.g. if the website is planned so that a user is feeling cool to accomplish different errands he wants and he is aware of the existing position in the website, so it is fine, or else he will be perplexed and will never visit this website.

### a) Logo

A logo must be placed on every page of the website at a fixed place (Left top corner of the page)

due to which a user will be sure about his visit of the site that he is on the same website which he is searching for some time.[2].

### b) Title

Title/Name must be placed on every page of the site having a link on it [3].

### c) Search

A search option should be present on every page which will ease the user to use the site and search everything without going to the home page [4].

### d) Breadcrumbs

There should not be the expectations from the user for efficient use of the breadcrumbs. The proficiency of the routing can be increased by the efficient use of the breadcrumbs and guidelines will be provided to the users using the website [5].

### e) Visited and Unvisited Links

The visited and unvisited links should be of specific color. There should be the proper colors for the visited and unvisited links. Before the visiting of a link, it should be of blue color and when it is visited then its color should be changed from blue color to purple which will be helpful for the user to discriminate between the visited and unvisited links [6].

### f) Avoid Scrolling Horizontally

The page should have appropriate design to prevent the user from scrolling horizontally. The horizontal scrolling is time wasting and tedious process for the user of the site to visit the all items present on the page [7].

### g) Back button is disabled

Different websites consist of bundle of navigation links which are open in the new window/new tab when they are clicked. The back button became disabled rather than enabled which is a tedious process because the new opened window is fresh having no information regarding the earlier visited links [8].

### h) Font Size

The font size must be at least 12pts [9].The older persons (ages 65 and older) are the greatest developing on the web and 43% older persons face difficulty as compared to the young persons [10].

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i) *Typeface*

The two font styles should be followed i.e. Verdana or Arial and the Verdana font style is the preferred style and is linked on all the pages of the website. This font style may be used to enhance the effectiveness of the site [11].

j) *About Us*

The About us is an important segment is visited by the users to gain the information/guidelines about the College/Institution website. Our studies demonstrate that companies ignore crucial vision to link with users through the portal [12].

k) *Site Map*

Site maps are the important parts of the site which summarize the whole website. It shows the hierarchy of the website [13].

1. *King Edward Medical University, Lahore (www.kem u.edu.pk)*

S#	Parameters	Yes	No
1	Logo	Yes	
2	Title	yes	
3	Search	Yes (Not on linked pages)	
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	yes	
8	Font Size	yes	
9	Typeface	yes	
10	About us used for org. info	Yes	
11	Site Map		No

In agreement with the diverse policy and probing for these regulations in the website of the above mentioned institution, it has been taken in the deliberation.

The monogram of the institution is present on the home page on the left top corner satisfying the rule. The title is also present on the home page as well as on the linked pages at the top of the page beside the monogram.

According to the regulations there should be a search choice on the top right side of the page on the home page as well as on the linked pages, So after searching the site of that institution, it has been seen that the search option is present on the top right corner of the home page but it was also seen that it was not present on the linked pages.

The breadcrumbs show the step by step navigation which was recently navigated, but in the site of this institution it is lacking.

The site was also checked for the colors of the visited and non visited links. When the link was clicked

then it was observed that the clicked linked did not change color which is big problem for the user to discriminate between the visited and non visited links and he can't be aware of himself that which part of the site he has visited.

There is no horizontal scrolling in the website and the user is free of tedious effort to scroll horizontally.

When the site was tested for the back button, it was analyzed that when the different pages were navigated in the site, we were capable to go backside (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled back button.

The font size is at least 12pts according to the policy which is helpful for the old people using that site.

The typeface in the site used is Verdana and Arial as in the regulations.

As according to the rules, there should be an "About Us" option in which there will be the information about the institute/organization, which is present in site of that institution.

The "Site Map" shows all the stuffing of the site in tree structure, so by clicking on the "Site Map", it will be supportive for the user to see that what contents this site involves, but this site lacks the "Site Map".

2. *Punjab Medical College, Faisalabad. (www.pmc.edu.pk)*

S#	Parameters	Yes	No
1	Logo	yes	
2	Title	yes	
3	Search		No
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	yes	
8	Font Size	Yes	
9	Typeface	yes	
10	About us used for org. info	yes	
11	Site Map		No

The monogram of the institution is at the proper place (Left top corner). The title is available on the home page and on the linked pages also. Following the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages.

Breadcrumbs are not creating in this site and the color of visited links is also not changing.

There is a horizontal scrolling in the website which is tedious effort for the user to scroll horizontally again and again to see the contents on the page. When the site was tested for the back button, it was analyzed that when the different pages were navigated in the site, we were capable to go backside (the back button is enable) and the linked contents do not open in the new

window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled back button.

The font size is at least 12pts according to the regulations which is helpful for the matured people using that site. The typeface in the site used is Verdana and Arial as in the rules.

“About us” is present in the site giving the information of the Institution.

“Site Map” is not present which can escort to puzzlement for the user because the “Site Map” provides the stuffing of the website in tree structure from which a user can guess that what the contents it involves in less time.

3. *Quaid e Azam Medical College Lahore (www.qamc.edu.pk)*

S#	Parameters	Yes	No
1	Logo		No
2	Title	Yes	
3	Search	Yes(Not on right top corner & not present on the linked pages)	
4	Breadcrumbs		No
5	Visited & unvisited Link	Yes	
6	Avoid Scrolling horizontally		No
7	Back button enable	Yes	
8	Font Size	Yes	
9	Typeface	Yes (Times New Roman)	
10	About us used for org. info	Yes	
11	Site Map		No

The monogram of the institution is not at the proper place (top left corner).

The title is present on the home page and on the linked pages.

The search option in this site is present but is not at its proper place and there is no link on it which can create a big problem for the user because the user is aware only about its proper place and when he finds the search option absent on the page and he will be confuse about searching the required contents on the site.

The breadcrumbs in this site are not creating and the color of the visited links became changed from that as at the time of unvisited.

There is no horizontal scrolling in the website and the user is free of tedious effort to scroll horizontally.

When the site was tested for the back button, it was analyzed that when the different pages were navigated in the site, we were capable to go backside (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed

to use that site and will be facilitated to visit auxiliary links by clicking on the enabled back button.

The font size is at least 12pts according to the rules which is assistive for the aged people using that site.

The typeface in the site used is Arial as in the rules.

“About us” is present in the site supplying the information of the Institution.

The “Site Map” is lacking in the site of this institution.

4. *Rawalpindi Medical College Rawalpindi (www.rmc.edu.pk)*

S#	Parameters	Yes	No
1	Logo	Yes	
2	Title	yes	Link not available
3	Search		No
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	Yes	
8	Font Size		
9	Typeface	yes	
10	About us used for org. info	yes	
11	Site Map		No

The monogram of the institution is at the proper place (Left top corner). The title is available on the home page but is lacking on the linked pages. Following the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages.

There is no creation of the breadcrumbs when the site is further searched/navigated.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

When the site was checked for the back button, it was evaluated that when the different links were visited in the site, we were able to go back (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled rear button.

The font size is at least 12pts according to the rules which is assistive for the aged people using that site.

The typeface in the site used is according to the policy.

“About us” is present in the site supplying the information of the Institution.

The “Site Map” is not present in the site to support the user to see the stuffing of the website in less time.

5. *Hamdard College of Medicine & Dentistry, Karachi (www.hamdard.edu.pk)*

S#	Parameters	Yes	No
1	Logo	Yes	
2	Title	yes	Link not available
3	Search	Yes	
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	Yes	
8	Font Size		No (11 pts)
9	Typeface	yes	
10	About us used for org. info	yes	
11	Site Map	yes	

The monogram of the institution is at the proper place on every page.

The title is available on the home page and on the linked pages but a link on it is not available.

The search option in this site is present on its proper place (top right corner) following the rule which is assistive for the experienced and fresh users to search all the contents of the website which he wants to search by saving precious time.

The breadcrumbs are not creating in this site.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

When the site was checked for the back button, it was evaluated that when the different links were visited in the site, we were able to go back (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled rear button.

The font size is at least 11pts which is not following the rules.

The typeface in the site is according to the rules.

“About us” is present in the site supplying the information of the Institution.

The “Site Map” is also present providing the hierarchical structure of the contents of the site.

6. *Ayub Medical College, Abbottabad (www.ayubmed.edu.pk)*

S#	Parameters	Yes	No
1	Logo		No
2	Title	Yes (Link Not available)	
3	Search		No
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	Yes	
8	Font Size	Yes	
9	Typeface		No (It is Times New Roman)
10	About us used for org. info		No
11	Site Map		No

Logo is not present in the whole site and the title is present but link is not present on it.

According to the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages.

The breadcrumbs are not creating in this site.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

When the site was checked for the back button, it was evaluated that when the different links were visited in the site, we were able to go back (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled rear button.

The font size is at least 12pts according to the rules which is assistive for the aged people using that site.

The typeface in the site used is Time New Roman not following the rules.



“About us” is not present in the site.

The “Site Map” is not present in the site to assist the user to see the contents of the website in less time.

7. *Khyber Medical University, Peshawar (www.kmu.edu.pk)*

S#	Parameters	Yes	No
1	Logo	Yes	
2	Title	yes	Link not available
3	Search		No
4	Breadcrumbs	yes	
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	yes	
8	Font Size	yes	
9	Typeface	yes	
10	About us used for org. info	yes	
11	Site Map		No

The monogram of the institution is at the proper place on every page.

The title is available on the home page and on the linked pages but a link on it is not available.

According to the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages and breadcrumbs are present in the website of this institution.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

The back button in this site became disabled when further navigation is encountered which is problematic for the user because a new window is opened for each navigation and the user can't go back by clicking on the back button which became disabled.

The font size is at least 12pts according to the rules which is assistive for the aged people using that site.

The typeface in the site used is according to the rules.

“About us” is present in the site providing the information of the institution.

The “Site Map” is lacking in the site of this institution due to which a user can't understand the clear image of the site.

8. *Peshawar Medical College, Peshawar (www.prim.edu.pk)*

S#	Parameters	Yes	No
1	Logo	Yes (But on right top corner)	No
2	Title	Yes	Link not available
3	Search		No
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	Yes	
8	Font Size		No (9)
9	Typeface	Yes	
10	About us used for org. info		No
11	Site Map		No

In the site of this institution, logo is present but on the right top corner rather than on the left top corner and the title is also present but a link is not present on it. According to the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages and the breadcrumbs are also not present in the website of this institution.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

When the site was checked for the back button, it was evaluated that when the different links were visited in the site, we were able to go back (the back button is enable) and the linked contents do not open in the new window, so the user will feel relaxed to use that site and will be facilitated to visit auxiliary links by clicking on the enabled rear button.

The font size is 9 pts which does not follow the rule.

The typeface in the site is according to the rules.

“About us” is not present in the site providing the information of the institution.

The “Site Map” is not present in the site to assist the user to see the contents of the website in less time.

9. *Jinnah Medical College, Peshawar (www.jmcp.edu.pk)*

S#	Parameters	Yes	No
1	Logo		No
2	Title	Yes	No link on it
3	Search		No
4	Breadcrumbs		No
5	Visited & unvisited Link		No
6	Avoid Scrolling horizontally		No
7	Back button enable	yes	
8	Font Size	Yes	
9	Typeface	yes	
10	About us used for org. info	yes	
11	Site Map		No

The monogram of the institution is not present.

The title is available on the home page but having no link on it.

According to the rules, there should be a search option on the top right side of the page on the home page as well as on the linked pages, but after searching that site, there is no search option on the home page and the linked pages and the breadcrumbs are also not present in the website of this institution.

When the site was navigated for analyzing the colors of the visited and non visited links, it was evaluated that the when the links were navigated for further searching and was back to that link, it was noticed that the color of the visited link was not change to purple which is a big exhaustion for the user using the site because he will not be sentient of himself that which part of the site he has navigated so far.

There is a horizontal scrolling in the website and the user will face much problem and will be time consuming in seeing the contents of the page and scrolling horizontally again and again.

The back button in this site became disabled when further navigation is encountered which is problematic for the user because a new window is opened for each navigation and the user cant go back by clicking on the back button which became disabled.

The font size is at least 12pts according to the rules which is assistive for the aged people using that site.

The typeface in the site used is according to the rules.

"About us" is present in the site providing the information of the institution.

The "Site Map" is lacking in the site of this institution due to which a user can't understand the clear image of the site.

every type of user in using the sites, due to which the users became bored and decide not visit that site again. The sites must follow the rules of the usability to entertain the user in exploring the different pages of the site and to save the precious time in searching the required contents. When the different parameters of the usability were checked for different colleges/universities websites, then it was noticed that most of the sites do not follow the regulations which restrict the interest of the user in using the websites and his objective to use this site is not fulfilled, so the idea is to be a specific rule to be applied to the sites and these sites must follow these rules to be valuable and attractive among different users. If the websites are according to the rules then it will save the precious time of the user in exploring and encountering the different tasks and the user will also be satisfied from his encountered tasks.

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6. <http://guidelines.usability.gov/guidelines/98>
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## II. CONCLUSION

After comprehensive study of the sites of different universities/colleges, it has been accomplished that most of the colleges/universities are not the followers of the usability rules and there is a hurdle for