

Best Practices of UI Elements Design

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Abstract— This paper is emphasized on the importance of designing good user interface and how to do that. After comparison of graphical elements on multiple basis, I have figured out a few ideal practices which will enhance the user experience for customers and help the businesses. The Website should be fully responsive and should have a uniform layout. Images should be unique and look professional.

Keywords—user experience, user interface, graphic designing, elements, brand identity, user engagement, conversion rate.

1. INTRODUCTION

User interface elements plays main role in the conversion between a user and system. Better placement of elements will helpful for increasing rate of conversion as well as user experience. For this, It should be easy to access and located at the position where user expects it to.

Following are some UI elements but are not limited to:

- **Input Fields:** text-fields, buttons, radio-buttons, checkboxes, list, dropdown-list, toggles, date picker field etc.
- **Navigational Components:** Attribution based breadcrumb, location based breadcrumb, slider, search-box, pagination, tags, icons.
- **Informational Components:** tooltips, progress bar, progress circle, arrows notifications, meatballs menu, modal windows, message box.
- **Containers:** accordion(for expand and collapse sections)

After discussion about main elements, now I will discuss the size and design of every section in website.

2. Designing a Button:

- Buttons are small but important element of interaction design. It plays great role between a user and system & tells about user's action.
- In this section, I'll describe some rules to create effective buttons in user interface design:

i. Eye-catching buttons

When user comes to a website, they should get the button instantly and need to know what is 'clickable' and what's not. When It will take more time to understand a interface for a user, UI becomes less usable for them. Usability is all about user satisfaction and how they understand and use the things. When Usability and utility comes together then increase usefulness of the product.

Usability + Utility = Usefulness

- Techniques changes very quickly while user changes very slowly. They use their previous experience about UI elements and accordingly set their mind among UI objects. Like if this is a button then it should be inside a shape. That can be in a rectangle, filled rectangle, rounded rectangle, filled rounded rectangle, filled button with shadow and also have the properties such as size, color, shadow etc to make the object look like a button.
- Following are some designs of buttons that are familiar to most users:
- Filled button with square borders
- Filled button with rounded corners
- Filled button with shadows
- Ghost button

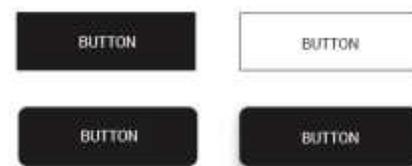


Figure 1. Different types of button designs

- I felt that "Filled button with shadow" is better than all the designs of buttons, because this design is easily understandable to the user and looks realistic like a button that can be press. Shadow effect make things more realistic.

- In some websites, I found the button between the content with no white spacing which looks like a box not more than this. Buttons surrounded by text or visible elements are not very much visible on the web page. In order to get user’s attention buttons should be placed in spacious regions where it could be seen easily.

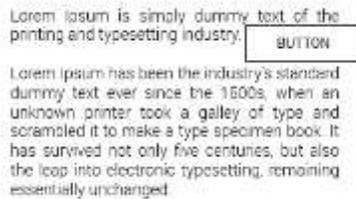


Figure 2. A Button surrounded by messy text

As a user, you can’t tell whether it’s a box or a button.

ii. Placement of button

- Button should be located at the place which can easily get users attention and user expects to see. Button existence is wastes if user cannot find it in first navigate.

iii. Work of the Button

- Button should be like, that is understood to a user by reading its label. Confusing labels on button can be the cause of major problem. Let me give you a small example. Imagine that you accidentally clicked delete action and a dialogue box opened that shows following message.



Figure 3. Buttons with irreversible actions

The label ‘OK’ doesn’t describe about action button. It will confuse the user, Most of users will ask themselves “What happens when I click on ‘OK?’” Dialog box design should not consisted these two options ‘OK’ and ‘Cancel’ rather than this the action of the button should be use as its label. This will help users to understand the work of button and for differentiate the buttons red color can take in use for delete button as red states danger.



Figure 4. Designing of ‘delete’ button

Now ‘Delete’ button clears the meaning of the button itself.

iv. Size of a button

- Button size tells about the priority of element on the web page or any application. Small button means less important action whether large button means more important action. By making button like this, engagement of users will increase.
- Most important button should look like it’s the most important. The designing of this should different (size, color) so that it captures user’s attention.



Figure 5. Example of good CTA design

Example:

- I have seen in many mobile apps, buttons are too small. Which may cause of mistyping and it made bad impact on users. So button should also be finger-friendly. Proper spacing between two buttons and properly sized buttons are must for user friendliness.



Figure 6. Comparing Size of button

Left: properly-sized button. Right: buttons are too small. Image: Apple[1]

- (MIT Touch Lab) study found that finger pads averages are between 10-14mm and fingertips are between 8-10mm. So atleast 10mm*10mm will be good touch target size.

v. Fix number of buttons

- So many buttons on a single web page or an application can be confusing for audience. Limited number of button can help in better results.

3. Designing a Search Box

- Though the simple combination of input box and a submit button made search box. But search box design must be attractive. When a user come to a new website he find for search box first, to get their response quickly.
- The design of search box matters a lot for user experience. So in the following section, I'll describe about improving search box designing.

i. Magnifying Glass Icon

- In mostly sites, we see the icon use for search is magnifying glass. So most of users have a mindset that search box should look like this. By magnifying glass icon user can know about this even without any text-label.



ii. Highlighted Search Bar

- If search bar is an important function for a website or application then it should be highlighted prominently. It has to be easy to use as they not need waste their time in searching it.



Figure 7. Comparing search bar designs[2]

In above pictures, left image shows that without text field a search bar become less noticeable whereas in right side image it become more noticeable because of text-field with magnifying glass.

iii. Search bar must contain a search button

- A search button helps people understand that there is one more step to do or they can press enter to reach on their destination of search. Whereas When search bar has no search button it gets complicated to understand what to do next.
- Following are main points which helps in engaging users and help them to focus on the search button:
 - a. Moderate size of search button will help users to spot search field.
 - b. It should be better if search button has some different color than the search field or if color is same then button should carved-out, so that user will get to know easily.
 - c. 'Search' label in the text field is must.

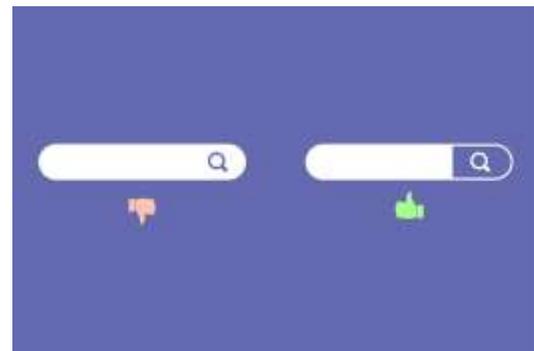


Figure 8. Comparing search bar designs

iv. Search box on every page

- Far from designing, It is also necessary that every page of site contain search button. So that when user needs to find the content that they are looking for, user can use search box from that page where he is on the website.

v. Simple Search Box

- According to usability study, Simple design is easily understandable by users whereas complex design decreases usability and non-understandable for users. It is more convenient for user having no

advanced features in search box, if site is not complicated.

- If a website is complicated then advanced search is must. So it will be good if site contain both search bar simple and advanced. Advanced search bar with filters is good for e-commerce websites such as Amazon, Flipkart etc.



Figure 9. Advance Search Design

vi. Placement of Search Box

- The placement of search box should at the place where user expect to find it. This is better for user experience if there is no need to find search box, is spotted by all easily. The pattern you see below was taken from a study.
- I asked people(150 participants) where they expect search bar placed to. The study found mostly people want it on the top-right or top-mid of the website. It is more convenient for them to spot search field.

18%		40%		42%

Figure 10. Search box placement survey chart

Above chart shows mostly users expected it on top-right side. Then in middle of the web page. In many websites such as Amazon, Flipkart this box is in center and on Apple website it is located in top-right corner. when user comes to their website they do not need to find for search they get it by itself. Whereas in WhatsApp application it's in top-right corner.



Figure 11. Placement of search bar in flipkart



Figure 12. Placement of search bar in Amazon

Thus, search box should be on place where user expect it to be. If it's not visible or located at the place where user have to scroll page or behind the navigation then it badly impact on engagement and can be cause of down-fall in conversion rate.

vii. Proper Field Size

- In some website I found input fields that are too short, which can affect the usability. When a text box is too short user can able to write long queries but only few words are visible at a time that is tough for editing.
- While a text-field with limited number of characters helps in usability. As user already knows they have to write limited content, so they will write short and imprecise query. And they are able to read and edit their queries easily. A rule says text-field size should be of 27-characters input.

For Example: Search box used by Amazon is proper sized.



Figure 13. Counting characters of Amazon search bar

- It would be also nice if a search grow with a mouse-click, this will save space and convenient for users. Sometimes complete search box information is not

shown to users whatever they type like done in following image, it becomes hectic for users. So search box information should be visible to users.

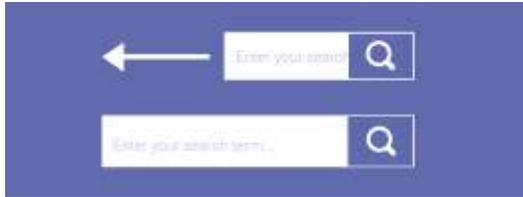


Figure 14. Properly sized search bar design

viii. Auto-Suggestion work well

- When user start typing query then auto-suggestion mechanism helps them to find a query quickly. This mechanism not only save time but also guides user to find proper query. Some users are very bad in searching their queries in proper manner and they do not get good answers in first try, they switch to substitutes websites. Which reflects negative impact on the users. While auto suggestion makes positive impact with better search queries.
- **Tips:** Auto-suggestions should be related and useful. When user start writing a query and as after 3rd character entered, suggestion should be display. It will convenient for user if they get quick suggestions. Suggestion-list length should not be so lengthy (less than 10 items without scrollbar) which may overwhelmed the content. Suggested item should be in bold format that shows difference.



Figure 15. Designing of Google search box

- Google search[3] is a good example of perfect search box.

ix. Label in the search box

It will be better if what you can search for, is clear to all users. For this, sample or hint can be add as placeholder within input field then user will know about the search field for.[4]



Figure 16. Designing of Flipkart search box

- Search is a function which is used by overall users for finding their queries, the designing of this box is not simple as minor changes can decrease the usability and by doing such activity as the proper size of input field and set the limit of characters in search field can increase usability with overall user experience.

4. Designing a Form



Figure 17. Comparing form designs

i. Sections Alignment

- Alignment is the process of arranging content in well defined structure. If data on a website organized in a structured way that will be eye-pleasing, effective to their customers. Proper padding, margin, spacing between the text and text field can be proved helpful in making a form proper.
- In a research I found that left-hand side alignment has good readability than others and it also takes less completion time.
- In above image there are 4 options, with proper alignment and having the label text as close to the text field makes this more relatable. Spacing between all labels should be same, it will help to the user in scanning form in one go.

ii. Related fields can be grouped

- Grouping related field in a form can be a good way to reduce the space. Like If a form has a field city and second field is country then it can be grouped in same row rather than two different rows.

Proper and good amount of spacing between the columns and also between each section is must.



Figure 18. Comparing facebook form designs

- Here is a example of facebook sign-up form. in old version first name and last name field was in different rows. For the improvement of user experience in updated version of facebook they launched their new sign-up form which is eye soothing and having a single row of name. The row consist two columns First Name and Surname. And also giving label as a placeholders which saves space and increase readability.

iii. Format of Input fields

- Every text field should contain different foreground and background color for example input field color can be solid white and placeholders can be grey. Though border with same grey color will look better and people will pay more attention for it. And If hint will placed with tough labels(hardly understandable by users) then chances of error will reduced.

iv. Adding visual hints

- In the input fields where users have to answer manually is tough for them. Sometimes users become lazy to type it manually so giving them few suggestions upfront and knowing their thoughts from it, can be a better way to get their perceptions.

v. Optional vs compulsory

- This is the point which defines the quality of a form. Using asterisk at the place of 'required' will look quite cool. But if in a form mostly options are mandatory while only one or two are optional then showing optional on that field should be used rather putting asterisk on all the fields.

vi. CTA conversion

- Though, Interface is pretty but call to actions are not clear enough or too small then conversion rate will be decrease. Call to actions should be visible to all of it's users. Mostly forms contains two CTA; primary is proceed and secondary is cancel. CTAs can look like

a text link or a solid rectangle but prominence should be given to one of them.

5. Designing a Navigation Bar

i. Easy to find

Menu bar should be visible to all users easily so that they can easily interact with the user interface. When navigation and content of website text contains the same color, size and font which is not prominent and conspicuous for visitors of the site. It should be observable and distinguished. Most important thing is spacing between all the navigation links which has to be same. And Navigation Bar should be placed on the top of web page or at left hand side(commonly used place).

ii. Easy to operate

Font size of the navigation links should be at least 14 pt or 16 pt so that user can facilitate click on it. Websites or mobile applications having small menu options can become a cause of trouble to its users. Due to bad user experience they might lose their customers. Letting click users in easy way and having clear interface will be great for improvement of user experience.

When a user click on dummy menu options then they will not get response which reflects negative impact on the user. So if there is no content in the link, then it should not be shown in the navigation link. Only clickable menu links should be there, that are responsive. Unclickable links can affect site users.

iii. Order of Menu Links

Menu ordering is the most important principle in navigation bar design. Menu are first interactive element for user, if a user comes on website then for getting knowledge about the company or business opens the links such as Services, About us, Contact us etc. Keeping main menus option characters 7 or less than it is the proof of good navigation design.

iv. Clear User Interface

The content on the web page must be clear. Messy and lengthy content that is not easily readable become trouble sometimes for its users. Whereas simple, short and straightforward content could be understood.

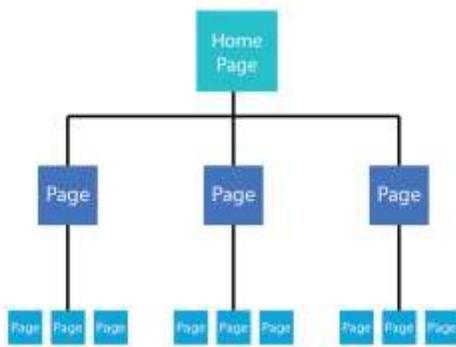


Figure 19. Simple Navigation bar design

v. Simple Design

Less items in the main navigation is very attractive. If a site have more data to add then it can be add in vertical menus. Sites having complex and many menus in main navigation distracts the user's attention that affects user experience.

vi. Minimalistic Design

Now a days minimalistic and simple web designs are in trend. Descent colors of the menu made user interface cool. If entire site follows some specific color then navigation bar should be picked up from any of these color, which suites with the web page better.



Figure 20. Minimalistic Navigation bar design

vii. Important should on top

A website quality measurement is all depends on the usability. Site will become user friendly if user get all expected options without finding. All the options which could have chances to get clicked by users such as services, should be on top. It will increase usability as well as conversion rate.

viii. Solve the navigation problem, provide a good user experience

Having good and useful content is worthless if user can not properly access that website. Sometimes, in a complex interface users may find the elements for what they searching

for but if they can not find it easily, this may become frustrated and reason to leave the site.

There are some points for making a better navigation bar so that more users can share the content of web page and content become more readable for them.

- a. Navigation menu should be easy to find on the web page.
- b. User could operate navigation links only by the mouse hover or mouse click over it.
- c. Each item should redirect to some link. None of these should empty.
- d. Navigation text should be précised and clear for all.
- e. Styling of every menu should be in same pattern.
- f. When someone moved their mouse over menus then it's appearance should change.
- g. A navigation bar should consist maximum 8 menus, not more than this.
- h. Ordering of menu bar should according to the importance and in standard pattern.
- i. Navigation bar should be sticky which can resizes itself on scroll and not disappear when user scroll down website.
- j. It should also be universal(on every page).
- k. When there are mega menus to show on the landing page then it will be nice to use hamburger menu.

6. Fonts & Typography[5]

i. Minimum Fonts

Having more than 2 fonts on a single page distracts reader while reading content available on the website. Different size fonts using in single web page are also disgusting and put bad impact on users. Pairing of fonts are also a typical task. If a text have its sub text, that is written in different font then it should be harmonious with that text.

In following image if we compare the combination of Raleway and Open Sans(Left) & Raleway and Broadway(Right) then we found left fonts combination creates a harmonious pairing whereas in right, due to heavy weight of Broadway font combination is looking unprofessional.

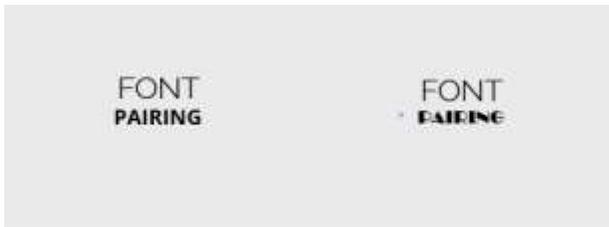


Figure 21. Comparing combination of Fonts

ii. Length of Line

- A line with heavy content looks messy, having a correct amount of words or characters in each line can be more readable for the users. It should be nice if each paragraph contain limited content which will be easy to maintain sites user experience.

“For a good user experience a line should have around 60-70 characters, whereas for mobile devices it will be 30-40 characters. Having right amount in each line might increase readability of site content.”

Line should be like this, if a reader starts reading content there should not be breakage of rhythm. The content of each line should not be too short or too long. Only main terms can be focused so that user read it once and fit in their mind forever.

iii. Typeface

- User can work on web, mobile and multiple of devices so there is a typeface required that works well on all the devices. A typeface which is legible for all the screens might prove better for user experience.



Figure 22. Different typefaces in typography

iv. Use of standard Fonts

- The use of cursive fonts such as Rouge Script, Vivaldi, Lovely Home can make content difficult to read. Although the font can be beautiful but it may tough while read by users. So font that has good readability like Roboto, Helvetica, Lato can be take in use. User Experience is not all about interface it also depends on the typography, good typography make good impression on the users.
- In many of typefaces some letters looks same specifically with “L”s and “I”s & spacing is also not proper. So This can make whole content confusing and messy which distracts users.

v. All Caps Text

- Content becomes difficult to read if written in all caps text. It may also a cause of poor user experience. Generally, to highlight something important in the web page or section, it is capitalized. But if text is capitalized in abundance, its readability decreases. User finds it rude.

vi. Don’t Minimize Spacing Between Lines

- User faces many difficulty while reading complex content on web page. Due to this, many times they switch for the substitute web page. Nobody want to invest their time in understanding content which is not clear, so conversion will decreases.
- To minimize complexity of text spacing between two lines- leading can be set accordingly. As a rule says, it should be around 30% of characters height for better readability.

vii. Proper Color Contrast

When background color and text written over it, are same then it may not be visible clearly. Color contrast should be proper when a user came to site then able to read content faster.

In a study, I found the contrast ratio of small text(i.e. at 12pt regular and less) should be 4:5:1 against its background whereas the contrast ratio of large text((i.e. at 14pt bold/18 pt regular and up) should be 3:1 against its background.

viii. Poor color combination/Use of bright colors

- Eye-pleasing is also a main factor in user interface. If users don’t find good color combination or find bright colors like red, green, yellow then they can not tolerate it as it will distract their mind and also force

to read content. Mostly users get headache by reading such colorful or bright content. It decreases user experience.

- So use of good colors is also required with the legibility in typography. If background is dark then text over it should be light and when background is light then text should be dark. In a study, it is found color blindness is a common in mostly men, so it will be nice if important information have distinguished property such as bold or underlined.

ix. Blinking Text

- Blinking text grab attention easily but due to this sometimes most important content are missed by users. Also it doesn't look professional, do distract users mind and is annoying also.
- Readability can be increased by avoiding blinking text. In some sites this is used when any update available for the users. For example when result declares then the link which takes user to result page is also blink. But it doesn't create problem or distract mind. Blinking text should be used only for temporary or in important information which user should know definitely.
- There are two types of typography every web page contains:
 - i. Micro Typography
 - ii. Macro Typography
- Micro typography deals with readability, spacing, white-spacing, glyph-width while Macro typography deals with the grid, format and hierarchy.
- Typography plays an important role in making site more understandable and readable. If it is perfect then website looks polished and grab users attention easily which is essential for better user experience.

6. Colors & Gradient

Color should according to brand like if there is a brand of any service like cosmetics. Then the brand should have a color which relates from its service somewhere. So it should be any shade of pink or purple or something like this. On other side, if it is a brand for example- app development. Then serious colors will suits and fit with it rather than funky colors.

Every brand should have their brand color which dictate as their identity. They can promote their brand with that color for getting better user experience. It can make impact

on users mind as user will know the brand with their color also.

Most of brands used shades of blue and black colors. Brand should use one or maximum two color in their brand identity despite using multiple of colors. It makes design childish.

Brand Color States shows the colors mostly used in web design.[6]

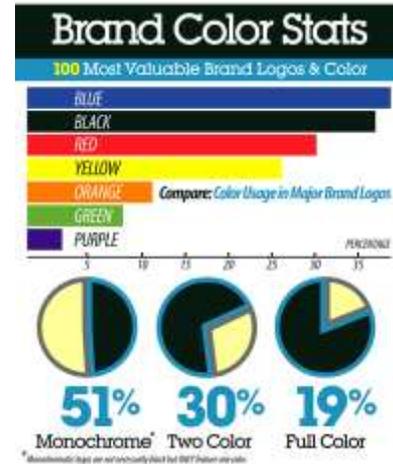


Figure 23. Brand Color Stats

- I usually see combination of colors which do not fit together. A design with strange gradients looks fake whether good gradients makes design more real. There are lot of gradients which looks good together. For example: Sky; red-purple, blue-purple, red-orange gradients are good gradients while there should not combination of red-green, purple-yellow.
- I often see many websites using gradient with no match which look like colors are going to fight together for showing their presence. Here are few color combinations, shows good and bad combination gradients:

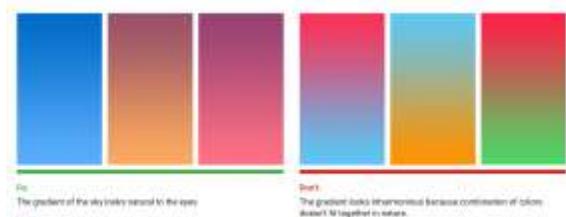


Figure 24. Comparing gradients[7]

Note: RGB color format is used for digital and web media whereas CMYK color format is used for print media.

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