

Module 7: Universal Design Topics

Progressive Disclosure:

The paper defines Progressive disclosure as a design principle that concentrates on managing information complexity by displaying information that is necessary or requested at a given point of time. It is primarily used to reduce the information load on the user in computer user interfaces, instructional materials and design of physical spaces. By reducing the information load on the user, it keeps a clean and uncluttered display thereby reducing the confusion, frustration, and disorientation from a cluttered information loaded display. This method is known to reduce significantly the number of errors and consequently save a lot of time and frustration recovering from errors. Progressive Disclosure principle is best used when people interacting with the system are infrequent users and when the task requires leading people through complex procedures.

One of the issues that are constant throughout the website is that often the information displayed on the screen for a page is more than what the user wants considering the path through which they have reached the page. In the redesign of the project, we would be avoiding cluttering the screen with all the information available and display different pages containing information that is necessary to the user at that point in time.

One of the usability issues in the website is that displays more information than necessary in the Examination section. The Examination section in the navigation bar has four elements – The Process, Circulars, Results, and Malpractice. On clicking any of the four options, the control takes the user to the same page where information about all four options is provided. No contrast or focus on the information about the option selected by the user is given which makes the screen cluttered with unnecessary information to the user. The following screenshots the same when clicked on The Process, Circulars, Results and Malpractice option from the main navigation bar in order.

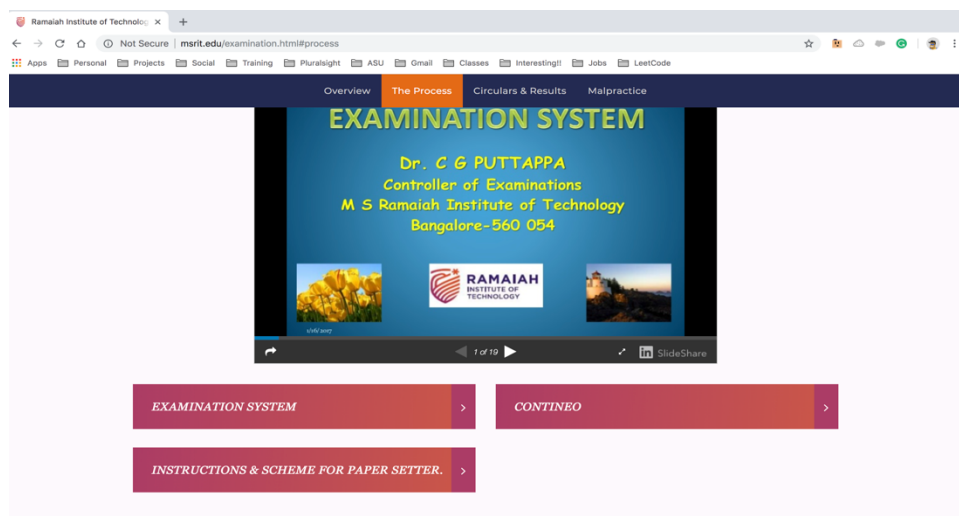


Figure 1: On clicking The Process

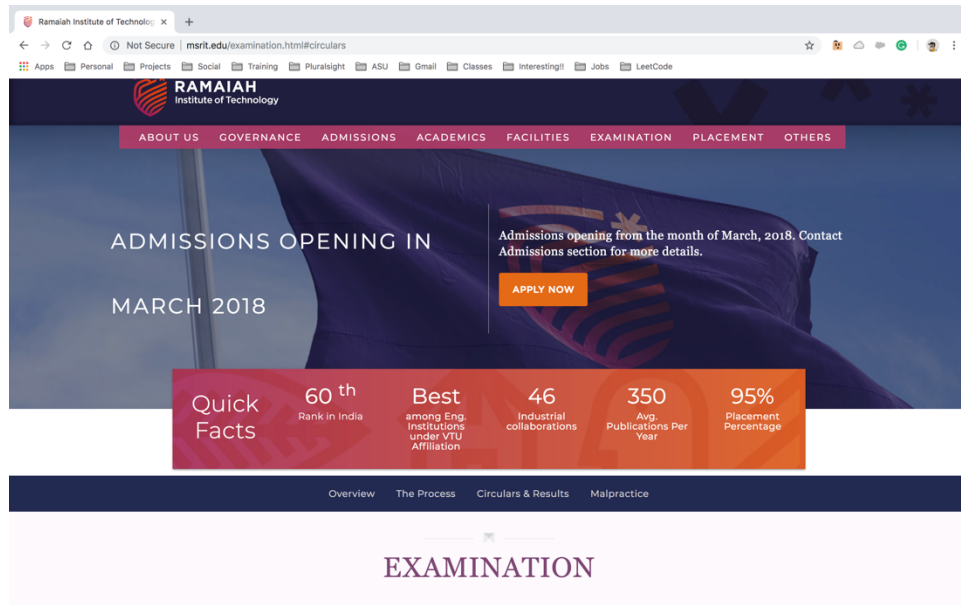


Figure 2: On clicking Circulars

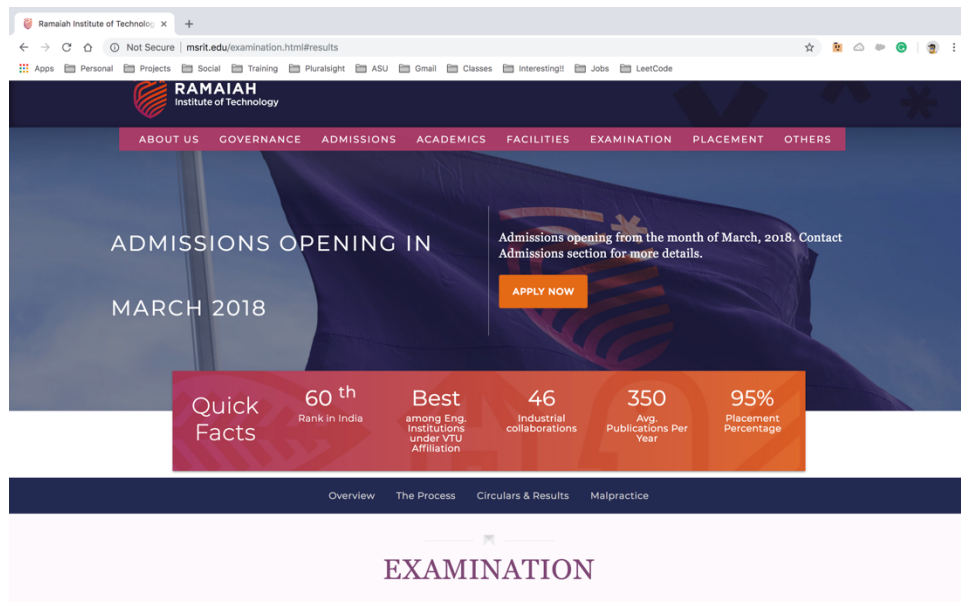


Figure 3: On clicking Results

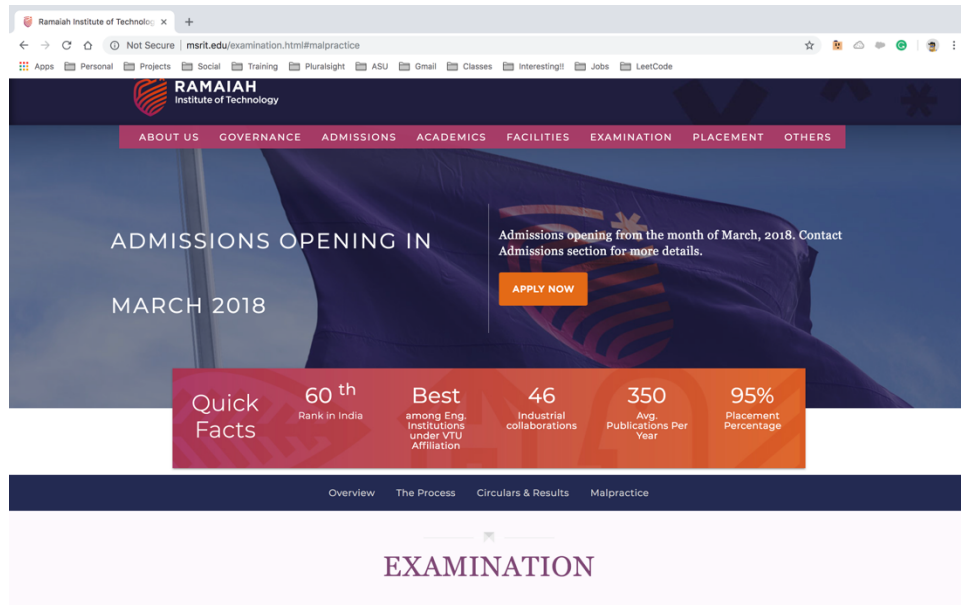


Figure 4: On clicking Malpractice

In all the screenshots above we see that irrespective of what option has been selected the information that is displayed starts with the general Examination section and includes information about all other options as well. This can be an information load on the user and might cause confusion and frustration to the user.

Aesthetic-Usability Effect:

The paper defines Aesthetic-Usability Effect as a design principle that describes the phenomenon where people perceive more-aesthetic designs as easier to use compared to less-aesthetic designs even if that may not be true. It is said that better the aesthetic design of the website, the higher is the probability of it being used. This phenomenon was complimented by a study of how people use computers where researchers found that early impressions of the website created long-term impressions about the quality of use of the website. Aesthetic designs also make people more positive and tolerant of design problems.

One of the first issues that can be seen on the website is that its aesthetics is poorly designed at several places. In the redesign of the project, we would be trying to improve the design aesthetics at different sections of pages like the carousel in the home screen. By doing so we can induce a positive and tolerant attitude and increase the probability of user using the website.

One of the usability issues we see on the website is the poor design of the carousel on the home page. Since the carousel is the first thing a user sees when he/she visits the website, a poor design would imply that the user may perceive it as less aesthetic which would affect the usage in the long term. When the images which are part of the carousel is of a particular color, the navigation buttons of the carousel get hidden as there is no contrast between the two and this may seem

like there is no navigation button at all which would lead to an unpleasant experience to the user.

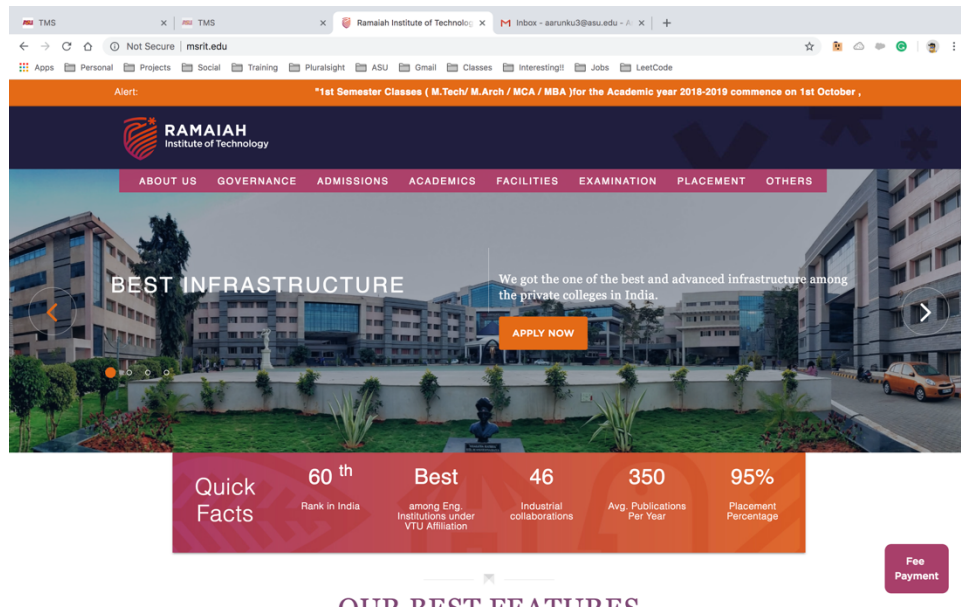


Figure 5: Carousel with Navigations Visible

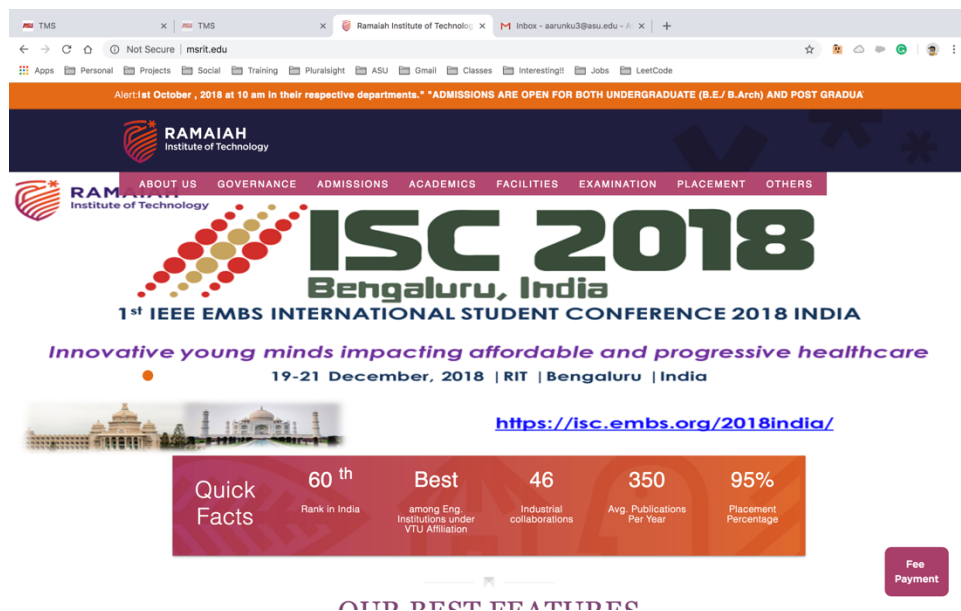


Figure 6: Carousel with Navigation Hidden

In the above screenshots, it is clearly visible the lack of contrast for the carousel navigation which results in it seeming hidden. This is a flaw in the design of the carousel which can affect the overall aesthetics of the site.

Alignment:

The paper defines alignment as the placement of elements such that edges of the elements line up along common rows or columns or their bodies along a common center. By aligning elements of the design one can create a sense of unity and cohesion which contributes to the overall complexity, stability, and aesthetics of the site. It can also be used as a powerful tool to guide the user through the design of the website. Simple forms of alignment include aligning along rows or columns. There are complex alignments where one can align elements along the diagonal. In such cases, the alignment paths must be highlighted for user convenience.

The website selected for redesign has a number of places where the alignment of the elements has gone wrong. The elements are not properly aligned, and this leads to elements getting overlapped. In the redesign of the website, we intend to fix all alignment issues seen and provide the user with a good alignment elements layout which could result in decreasing the complexity, increasing the stability and aesthetics of the entire website.

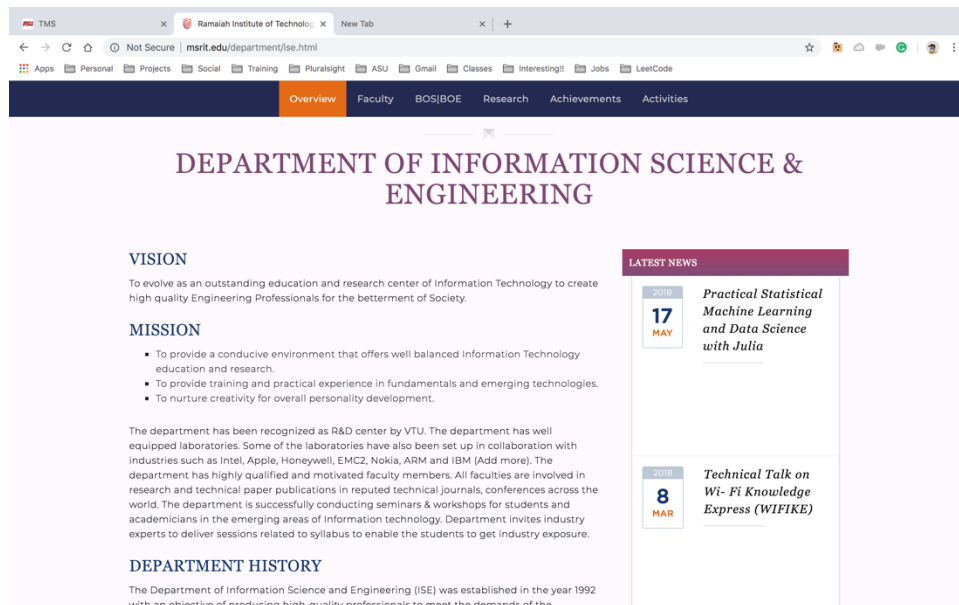
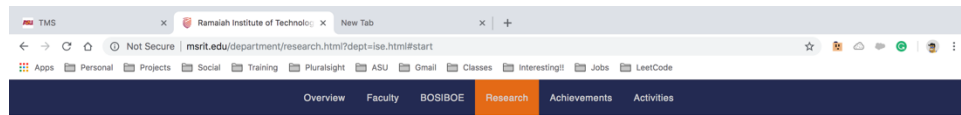


Figure 7: Department section with proper Alignment



INFORMATION SCIENCE & ENGINEERING

Research Publications

Authors	Title of the Paper	Journal/Conference Name	Year
Shantala Devi Patil, B.P. Vijayakumar, KiranKumari Patil	Fractal PKC-Based Key Management Scheme for Wireless Sensor Networks	Recent Developments in Intelligent Communication at Devices - Springer	2017
Sunitha G P, Vijayakumar	Energy Efficient Hierarchical multi-path routing protocol to alleviate congestion in WSN	International Journal of Adhoc & Ubiquitous Computing (IJAHUC) - Springer	2017
Dr. B.P.Vijaya Kumar, N.G.Goudru,	Evaluation of TCP performance using NDG loss predictor in wireless networks	International Conference on ADKOM - 2015, IEE Conference	2015
C. S. Vidya , B. P. Vijaya Kumar	Reliability Analysis in Healthcare Imaging Applications	Indian Journal of Information and Technology (IJIAT)	2015
Vijaya Kumar B. P. and Gazala H.	Self-Organized Mapping	ARNP Journal of	2015

LATEST NEWS

DATE

17 MAY

Practical Statistical Machine Learning and Data Science with Julia

DATE

8 MAR

Technical Talk on Wi-Fi Knowledge Express (WIFIKE)

Figure 8: Department section with improper Alignment

One of the usability issues we saw constantly throughout the website is the alignment of the elements. One of such instances can be seen under the departments in the academic section of the website. Each department has a navigation header which can be used to navigate between Overview, Faculty, BOS|BOE, Research, Achievements, and Activities. Each of these sections contains Latest News section as a column next to the tab specific content. The Latest News section is often misaligned and there is an overlapping between it and the main content. The above screenshots clearly depict the same. The first screenshot shows the proper alignment of the Latest News section. However, when navigated to the research section we see the Latest News section overlapping with the Research Publications section which hinders the overall aesthetics of the page.