

CHAPTER II

BIBLIOGRAPHY REVIEW

2.1 Basic Graphic Design

Graphic design is a form of visual communication to convey certain information or messages to the audience, or it can be described as an idea of visual representation, depending on the creation, selection, and organization of the visual element. According to Richard Greffe, Executive Director of AIGA, "Design is the intermediary of information and understanding." A given problem graphic design solutions can serve to persuade, tell, identify, organize, improve, motivate, evoke, discover, engage, and bring a wide variety of understandings. The solution of a design can be very effective because the solution can influence the behavior of a person, for example: people can choose a certain brand because they are interested in the design of the product, or people become interested in blood donation after seeing a public service advertisement. "Graphic design is a language that creates confidence in an idea, message, and object." According to Brockett Horne, a professor at the Maryland Institute College of Art. (Landa, 2014)

2.1.1 Design Element

Aspiring designers are people who enjoy creating images, processes and have basic knowledge of design elements and design principles that are used as tools that serve to support visual creation. The purpose of explaining design elements, which is basically to explore and review formal elements and design principles, as well as to find out the potential of each element and how to make the knowledge used to communicate and express.

In two-dimensional design, there are four basic design elements, namely: lines, shapes, colors, and textures.

2.1.1.1 Lines

The shape of a point is the smallest component in a line and is usually identified as a circle. In layer-based images, a point can be clearly seen with a single pixel (with or without hue) that is squared from a circle. Digital software that is usually used to create works, such as: "paint", all elements are based on pixels.

A line is made of points that extend or are made from various points that are combined to produce a line. The line is made with visualization tools depicted through a surface. Examples of visualization tools that can be used to illustrate a line include: a pencil, a brush with a sharp edge, a stylus, a software tool, or any object that can produce a mark (such as a cotton pentol dipped in ink, a branch inserted into coffee). A line is usually known by how long it is rather than how wide it is.



Figure 2.1 Lines in Website Implementation
Source: <https://speckyboy.com/lines-web-design/>

Lines have a variety of roles in communication and composition. By using a pencil to draw a line, the line will have direction and quality. Lines can look straight, angular, or curved, which can guide the eye from one's point of view in a direction. A line also has specific characteristics, such as thick or thin lines, smooth or rough, consistent, or messy, and so on.

Some of the categories in the line, namely:

1. Intact line: a mark painted on a surface
2. Implicit line: Lines made of parts that are not connected to each other but are perceived as one whole line.
3. Corner: Meeting points made with two lines or boundary lines that are in a shape.
4. Direction of vision: movements of an eye observing the composition; Which can be said to be a line of movement or a directional line.

The basic functions of the line, namely:

1. To explain: angles, figures, shapes to create images, letters and shades/patterns.
2. Painting boundaries and describing the regions in a composition.
3. Visually assists in tidying up a composition.
4. Helps to give instruction in sense of vision.
5. Can form an expression made of linear force.

If a line is the main element used to put a composition together or to describe the shapes and figures of a work design (or painting), that style is referred to as linear.

2.1.1.2 Shape

The general outline of something can be identified as a shape. The form can also be expressed as a closed form. The shape is created partially or completely with lines, colors, textures, or atmospheres drawn on a two-dimensional surface.

A shape is basically flat, which is interpreted as two-dimensional and measured by Length and width only. How the shape is drawn will determine a quality. All shapes can basically be divided into three basic shapes, namely the shape of a triangle, a

circle, and a square. Each of these basic shapes has a dense volumetric plane, such as pyramids, cubes, and spheres.



Figure 2. 2 Basic Forms and Fields in Website Design
Source: <https://id.pinterest.com/pin/89298005091317987/>

the image below can be seen on the left side, geometric shapes are made of straight edges, measurable angles, or have precise notches on all sides of the shape. Geometric shapes can also be mentioned as rigid. While the image on the right, which is referred to as an organic or biomorphic shape, is made of irregular curves or line images. The shape gives a naturalistic impression and can be drawn in a precise and neat way, or loosely and untidily.

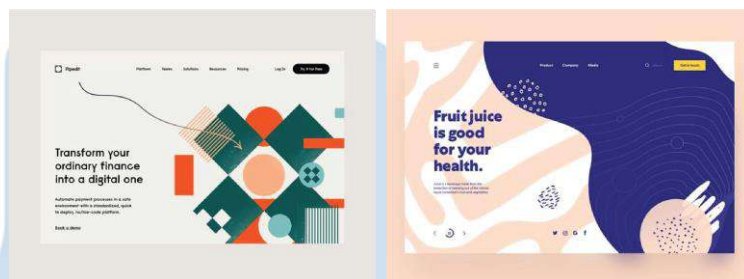


Figure 2. 3 Geometric (left) and Organic Shapes (right) in Websites
Source: <https://i.pinimg.com/564x/f8/e4/8c/f8e48c13330fa2690fea4fd5d2dd0b61.jpg>

Almost all geometric shapes can be regarded as non-objective or non-representational shapes, and can be referred to as basic shapes and pure creations, which do not represent as shapes that can be seen according to people's perceptions in everyday life.

Examples such as human forms, places, or things are examples of representational forms.

a. Figure/Ground

Figure/ground, or can be mentioned as positive and negative space is the basic principle of visual perception that relates to the shape of the background on a two-dimensional surface. In the way of thinking from people's perceptions, the brain automatically separates several graphic element figures separated by the background. Based on the figure and ground, the observer will look for signs that distinguish the shape that represents the figure of the ground. The shape or area created between the figures is known as ground or negative space. Many people are interested in figures in a composition, therefore, for people who are not used to observing an image or visual, a background can look empty and out of shape. But a designer always must include ground as an integral part of a composition. Theoretically, a background also has shapes called negative shapes. The combination of positive shapes and negative shapes can be considered as whole space. Like Figure 2.1, Figures (parrots) and ground (Magenta) are good considerations on Parrot Magenta's work.

b. Typography Form

In graphic design, numbers, letters, and punctuation marks also include a form, although usually as a symbol to describe sounds in a language. Similar to the primary shape, the type can be a straight line, curved line, organic, or geometric that can be made using a computer.



Figure 2.4 Typography
Source: Alexander Andrews(2017)

2.1.1.3 Texture

The tactile quality of a surface, simulation, or representation of surface quality is referred to as texture. In the visual arts, there are two categories for textures, namely: tactile and visual. The quality of tactile texture can be felt and touched. The shape is also mentioned as an actual texture. There are several printing techniques that can produce tactile textures over a printed design, including stamping, letterpress, engraving, embossing, and debossing.

Visual textures are the illusion of hand-made textures, those texture types are photos and scans of the original textures. Using skills in drawing, painting, photographing, and various image-making media, a designer can create many variations of textures.

A pattern is the consistency of repetition in a visual or element within a defined area. In various situations, a pattern must have systematic repetition with clear directions and movements. (The interesting thing in the pattern is that the observer anticipates a sequence.) If examined further, the structure of the pattern depends on the configuration of the three basic elements, namely: points,

lines, and skeletons. In pattern, any unit, non-objective form or representational form, can be based with a period.

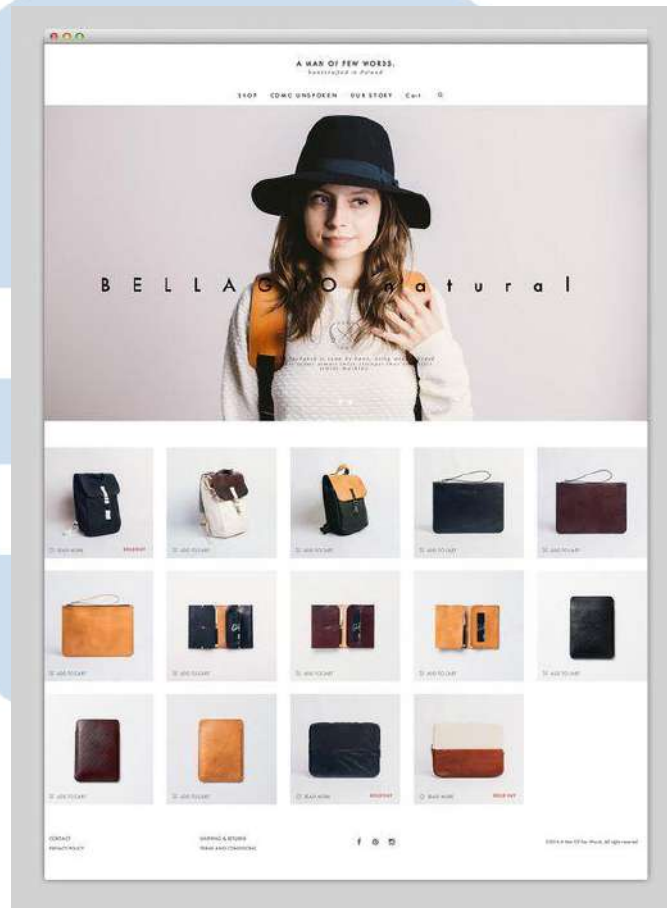


Figure 2. 5 Square Patterns in Web Design
Source: <https://nl.pinterest.com/pin/335940453430784815/>

For example, like the chessboard pattern, you can see the Figure / ground reversal made with a full pattern; the pattern has a balanced design called crystallographic balance. All-over pattern, or can be interpreted as a full pattern on the entire image without negative space, can be used as one of the graphic design solutions.

2.1.2 Design Principles

For drafting, basic knowledge of design principles can be utilized. With a combination of knowledge of concept creation, visualization, typography, and formal elements as a form-making vocabulary, design

principles can also be applied to the entire design project. The basic principles of a design are really related to each other. Equilibrium refers to stability in the manufacture of equilibrium that helps a composition. Creating assertiveness through the creation of visual hierarchies that improve the quality of communication. Design a composition in which graphic elements depend on the principle of unity in a visual.

2.1.2.1 Format

Before doing basic principle research, format is an important thing to understand. The format itself consists of many definitions, one of which is the format in a perimeter and the field that is closed as a limitation of a design. Formats can also be referred to as substrates, namely paper, billboards, mobile phone layers, and so on such as for graphic design projects. Plus, a designer always uses format as a term to describe the type of project, namely posters, mobile ads, CD covers, and so on. Graphic designers can work in a wide variety of formats

a. Format Shape



Figure 2.6 Website Formats

Source:

https://media.designrush.com/tinymce_images/89437/conversions/most-common-screen-resolutions-in-the-US-content.jpg

The CD cover has a square shape, one page of a magazine is rectangular, and the two pages of the magazine that come together have different rectangular ratios. A brochure with an open state will have a rectangular shape (landscape). Brochures have a variety of sizes and shapes, and there are different ways to open brochures. Mobile phone screens and computer screens also have different sizes.

Some formats have standard sizes. For example, all CD covers are the same size. poster substrates are also available in standard sizes; However, posters can be printed in different sizes. The form, format and media in some specific situations are predetermined, and as a designer must be able to work on the project within those restrictions. In printing, almost all size formats are available at prices suitable for a particular design. Paper type, shape, printing technique, and size can also affect the price. Paper costs half as much as printing work. The size is determined depending on the project, function, purpose, suitability, and price.

In making a design, regardless of the type of format used, each component of the composition must comply with the given format constraints. The pages given as guidelines, not only have a lot of white space, but also have edges where each sign and graphic element must be adjusted to the composition.

2.1.2.2 Balance

Balance is one of the principles that can use intuition, because it is able to use it with the physical movement of oneself. For example, if performing martial arts exercises, yoga, dance, sports, or gymnastics, one action to balance the opponent's attacks with the same actions. Balance is a stability of the visual weight distribution on each side, equal to the weight distribution of each

element in a composition. If a design has balance, it tends to be more harmonious. A balanced composition can affect the stability of communication with the audience. A composition that has a balance or stability that lacks can make the audience react negatively. Therefore, balance is one of the compositional principles that must cooperate with other design principles.

a. Interconnected Visual Factors

To understand balance, here are some interconnected visual factors that must be studied, namely: position, visual weight, and setting.

In two-dimensional design, weight cannot be defined as physical gravitational force, but rather visual force. Visual weight refers to the relative amount in visual appeal, importance, or emphasis of elements contained in a composition. Each element in the composition carries energy, a copy of pressure, strength, and weight.

Things like color, texture, size, and shape all contribute to the element of visual weight. Where the signs are positioned inside the page also has an impact on visual weight. At the same sign on that page with different point positions (bottom right, bottom left, center, top right, or top left), the difference will be obvious in visual weight due to different positions. In visual perception, different areas yet on the same page seem to carry visual weight.

b. Symmetrical Equilibrium with Asymmetric

The symmetrical design has an equivalent visual weight distribution, mirroring both sides of the element from the middle; or in other words, symmetrical reflection. Imagine a vertical axis in the middle of Figure 2.6 where two visual swans have the same visual

weight on the right and left sides. A symmetrical picture can communicate about stability and harmony.



Figure 2.7 Asymmetrical (left) and Symmetrical website (right)
Source: <https://i7x7p5b7.stackpathcdn.com/codrops/wp-content/uploads/2012/10/contrive.jpg>

Asymmetric has the opposite definition to symmetrical. Just like symmetrical, asymmetric has a balanced visual weight, but the difference is that asymmetrical there are no mirroring elements on either side of the middle. To achieve asymmetric balance, visual weight, position, color, shape, texture, size and markings on the page should be considered with all other signs. Each element and its position contribute to the balance effect in a composition.

2.1.2.3 Visual Hierarchy

One of the main goals of graphic design, namely for information communication and visual hierarchy is the main principle of information regulation. To guide the audience, designers use a visual hierarchy, the arrangement for all graphic elements is emphasized. Emphasis is the arrangement of visual elements according to importance, the emphasis on some elements over others, making some elements superordinate and subordinating other elements. Basically, designers determine which graphic elements to look at first by the audience, in a certain order. John Rea, as the creative director, created a concept called ABC emphasis:

- a. What things do designers want audiences to see first?
- b. What things do designers want audiences to see second?

c. What things do designers want audiences to see third?

As a designer, it is necessary to know what elements are given emphasis, and what elements are precisely given less emphasis.

It is also important for designers to remind that if all elements of the design are given the same emphasis, it is tantamount to nothing at all; The visual results will be chaotic. No matter how good the quality and style of the design are made, the visual hierarchy helps communication.



Figure 2.8 Visual Hierarchy in Websites

Source: <https://heysalsal.com/ui-ux/techniques-or-an-effective-website-layout/>

Emphasis is directly related to establishing a focal point. The focus point is the most necessary part of the design, for example like Figure 2.7, where the red apple is the focus point. The size, shape, direction, position, saturation, hue, value, and texture of the graphic elements all contribute to the emphasis of the focal point.

2.1.2.4 Rhythm

In music and poetry, most people interpret rhythm as a beat, made of emphasizing patterns. Inside graphic design, similar to musical beats, strong and consistent repetition, patterns of elements can set the rhythm, which makes the audience's eyes look around the page. The time can be set with the interval between the positions of

the elements on the page. Just like a song, a pattern can be shaped and changed, slowed down, or accelerated. A dancer knows how important it is to have consistent beats to move according to the rhythm. Rhythm, that is, the sequence of visual elements at specified intervals (such as a strong dance beat),

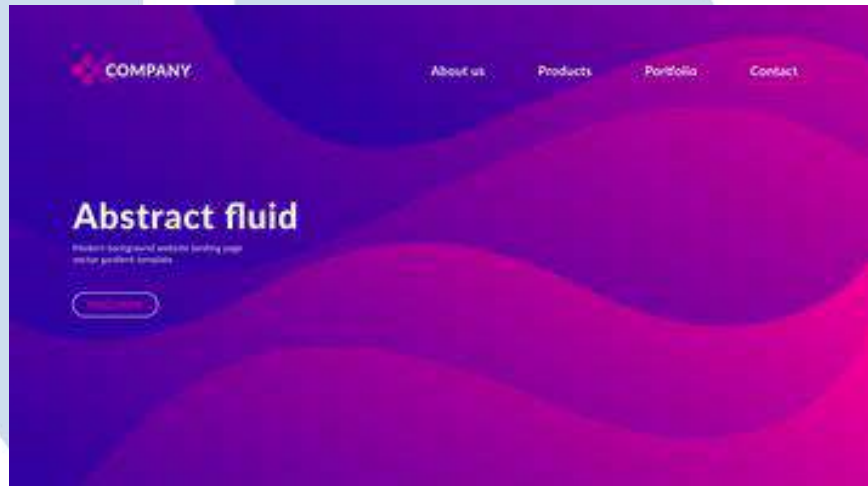


Figure 2. 9 Curvy Lines Rhythm Distribution in Websites
Source: <https://www.vecteezy.com/vector-art/542011-abstract-background-website-landing-page>

Through multiple-page formats, such as book design, website design, and magazine design, as well as motion graphics, it is essential to develop a coherent visual flow from one page to another. It is equally important to enter various elements to affix punctuation, accents, and create visual interest.

Many factors can be contributed to shaping the rhythm, namely color, texture, figure/ground nexus, emphasis, and balance.

a. Repetitions and Variations

The key to forming a rhythm in that design is to understand the difference between reps and variations. In graphic design, the repetition of that rhythm is punctuated by variations in order to create visual interest. Repetition occurs if some visual element is repeated several times or consistently. Variations are made of a

modification in pattern or replacement of elements, such as color, size, shape, distance, position, or visual weight. Variety can create visual interest to engage the audience and add an element of surprise. However, too much variety can negatively affect visual beats.

2.1.2.5 Unity

If looking at a website, have you ever thought about how a graphic designer can use many types of images to combine, as a cohesive unit? There are many ways to achieve unity where all the graphic elements in a design are so intertwined that they can form a larger whole and when combined, all graphic elements look like one big picture.

The audience can remember a composition more clearly if the compositions are combined into one. It relies on gestalt, German for "form," i.e., placing an emphasis on a neat overall perception.

From the gestalt, people derive certain rules of perceptual organization that govern visual thinking. This greatly affects how to build unity in the composition. People's minds try to create sequences, make connections, and to target the whole by grouping, perceiving visual units depending on location, shape, orientation, color, and likeness.

2.2 Illustration

In the explanation section about illustrations and illustration styles, the author takes the source from Art in Context (2022)

The term "Illustration" or in English "Illustration", comes from the Latin word "Illustrate", which means intellectual and spiritual enlightenment. In other words, illustration is a visualization made by various artists, visualizations that can be made of a picture, painting, collage, engraving, photograph, and so on., where an illustration does not need to be drawn, but can also be represented as a photo in a book that serves to provide an explanation.

People can see an image and can immediately capture the entire story in the picture, without having to read any writing. If you want to tell something through illustration, it means that the story is conveyed its meaning by means of drawing only.

From traditional hand-drawn illustrations, digital works have emerged, where now digital illustrations made of computers help in clarifying any writing. If a particular image does not explain anything, is it still referred to as an illustration, a work, or a graphic design? The following section is the explanation.

2.2.1 Differences between Visual Art and Illustration

A work of art can be a painting or a sketch, but it is still a piece that does not require writing, ideas, or stories to tell a message. Therefore, the Work is arguably more or less the same as an illustration. There seems to be a very slight difference between a work of art and an illustration, and with different types of illustrations to communicate a strong emotional message through vector graphics or acrylic paint, the two are still interchangeable.

The main purpose of a work of art is aesthetics, but the purpose of an illustration is to explain. An illustration combines specific needs and goals for the target audience, while the artwork can be completed without being misplaced.

2.2.2 Illustration Function

According to Alan Male from the book "Illustration: A Theoretical & Contextual Perspective", the function of illustration is divided into 5 parts, namely information, commentary, storytelling, persuasion, and identity.

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2.2.2.1 Information

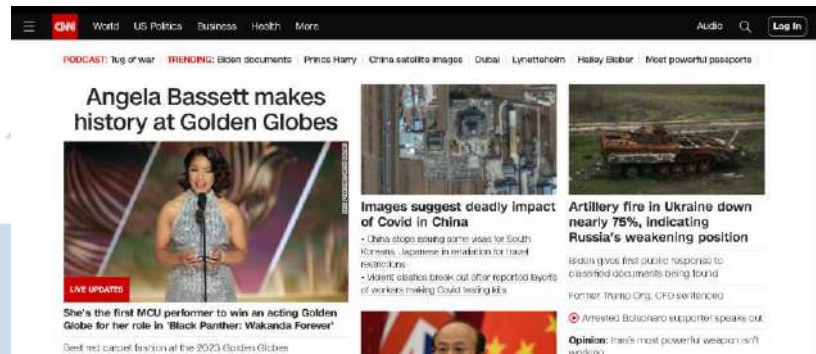


Figure 2.10 Informative Website
Source: <https://edition.cnn.com/>

Many have misconceptions in which illustrations serve as a means of transporting information that must be conventionally and technically realistic, both in visual language and subject matter. It is often thought of as dry and artistically, in the absence of visuals or the context of ideas from creativity and innovation. However, it may become important to consider a domain of illustrative practice that provides extensive contextual references, education, explanations, and instruction and includes many themes and lessons.

2.2.2.2 Commentary

The essence of editorial illustration is visual commentary. The illustration work has the main function of working with journalists, in order to produce illustrations based on what has been written in the pages of newspapers and magazines. This shows that the potential for use and application is very wide.

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2.2.2.3 Storytelling



Figure 2.11 Storytelling Website

Source: <https://www.mockplus.com/blog/post/storytelling-website-examples-and-templates>

An illustration that aims to tell something, arguably essential to a narrative fiction that is mostly found in children's storybooks, novels, and comics. With various media to tell stories through illustrations, Illustrators and media writers must be able to read this, and be able to understand the targeted audience. Next are some media for the appropriate age group to be the target market.

a. Interactive Books

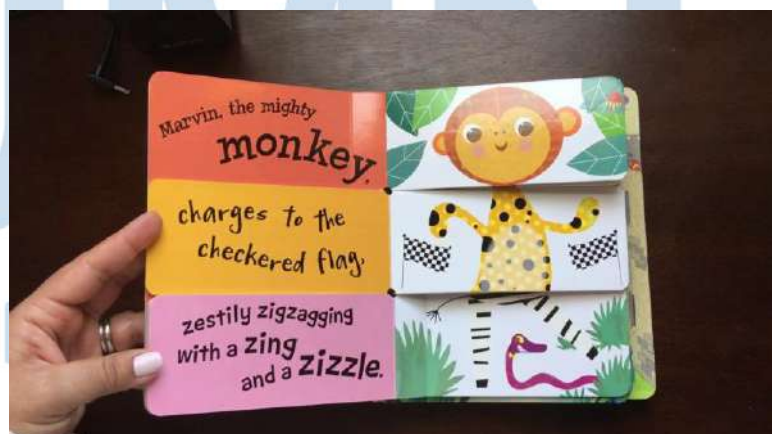


Figure 2. 12 Interactive Books for Children

Source: <https://youtu.be/EydDilwRfTk>

A storybook suitable for toddlers aged six months to two years is an interactive book, with content and writing that is easy to understand and narrate.

b. Picture Book and Pop Ups

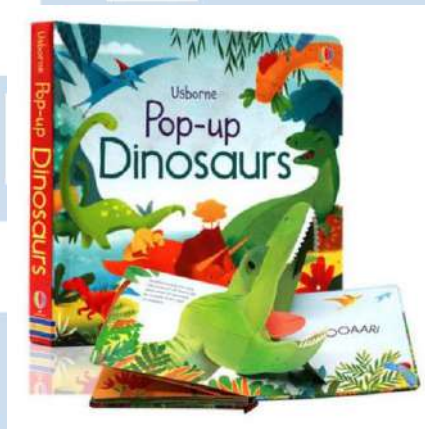


Figure 2. 13 Picture Book Pop Ups
Source: <https://youtu.be/EydDilwRfTk>

For young children aged 2 to 5 years or toddlers, it is very suitable to read picture books with less language or words and replaced with the use of a pop up feature that will make readers interact better so that if there is still writing that is not understood, it can be replaced by a pop up that gives a big picture of the story.

c. Chapter Book

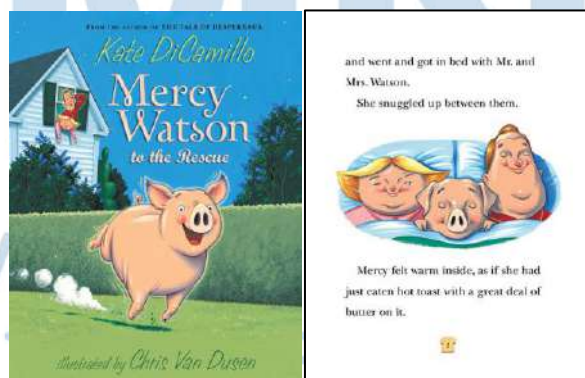


Figure 2.14 Mercy Watson to The Rescue Book
Source: Chris Van Dusen (2007)

Head to children aged 5 to 8, who may already know a few words, and can read a little book with various chapters, such as the book *Mercy Watson to the Rescue* with a little more written content with fewer illustrations in it. The illustration style also becomes more detailed.

d. First Novel

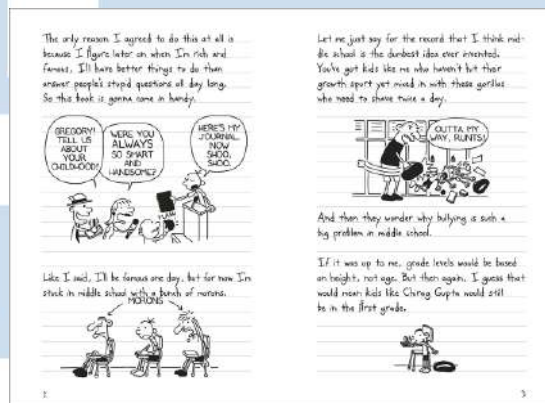


Figure 2.15 *Diary of a Wimpy Kid* Book
Source: Jeff Kinney (2010)

For children aged 8 to 12 years, who have been able to read novels for beginners, where images are still used but with more writing comparisons.

2.2.2.4 Persuasion

The use of illustrations has become a very powerful tool for persuading a message. The power of persuasion cannot be underestimated, and illustrations with the aim of persuading have already made great contributions over the years. The most used illustration example of persuasion is for political purposes especially in the 20th century.

A logo can be visualized in a variety of ways, from more complicated designs or more to simple geometric juxtapositions of the basic shapes that represent the first letter of the company name.

2.2.3 Types of Illustrations

Illustrations have been trained for centuries, or millennia, in the form of cave paintings, as well as ancient hieroglyphs. Etching can be found already from the 10th century and earlier. Illustrations are already classified into two main groups, traditional illustrations, and modern illustrations. Here are some types of illustrations reported from (Art in context,2022)

2.2.3.1 Traditional Illustration

Traditional illustration is referred to as work done by hand, where the artist uses tools such as pencils, charcoal, and paint, which are used on various surfaces of the drawing medium to create work, such as paper and wood.

a. Pencil Illustration

The use of pencils in illustrations is one of the most popular types, as it is easy and simple to create an illustration using a pencil. Pencils are available with various values, colors, and weights, for example, the use of graphite pencils, mechanical pencils and also colored pencils all have their own characteristics so that the results of illustrations also tend to be different.

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Figure 2.18 (1959) Gibson Les Paul
Source: <https://id.pinterest.com/pin/27373510208126031/>

Using different pressures in pencil use can produce wide shadows or fine lines, and the idea of such a picture can be easily done by even a small child. Therefore, this type of illustration is often used for most artists, and many of them always carry a sketchbook with them wherever they go to capture any moment that looks interesting.

b. Charcoal Illustration

The use of charcoal gives illustrators better mixing capabilities than pencil use, but charcoal does not have the same precision as pencils. Charcoal is available in the form of a rod or it can be in the form of a pencil which tends to have a darker color than ordinary pencils. Artists can use their fingers to blur them to produce a smoother shadow effect.

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Figure 2.19 Charcoal Portrait Art
Source: <https://id.pinterest.com/pin/27373510208126031/>

Charcoal produces darker, thicker, and smoother lines than from a pencil. Artists use charcoal to contrast textures and shadows, and designers use charcoal to add tone to works that have black shadows.

c. **Watercolor Illustration**

Watercolor illustrations are made only of pigments mixed with water, making them easier to use compared to the use of oil and acrylic paints. The result tends to be more transparent, which obtains light to seep in through watercolor illustrations suitable for illustrating visuals that do not require strong color suppression, where watercolor colors are more easily mixed and absorbed in paper.



Figure 2. 20 Jean-Paul Gaessler Watercolor Art
Source: <https://pin.it/7555n4w>

d. Pen and Ink Illustration

Illustrations using Pen and ink are also popular types of illustrations, which provide more precision and sharper contrast than pencils. However, for shading when creating works with a pen, should use a series of lines, because unlike, pencils, charcoals, pens cannot be combined with fingers.

Illustrators and Calligraphers often choose old-fashioned pens for illustration, because the thickness of the lines can be controlled depending on the emphasis applied to the pen, as well as creating different gradients when writing letters and words.

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Figure 2.21 Illustration of a House Using a Pen
Source: <https://pin.it/45fIKXE>

2.2.3.2 Modern Illustrations

Over time, illustration has grown more and more, and artists now use computers with digital programs. Digital Engineering is an imitation of the traditional illustration system, which produces modern illustrations. Both illustrations can produce the same effect, but with modern illustrations it is much easier to divert and change materials and techniques.

The available combinations seem limitless, such as graphics, collage, text, with filters and effects that illustrators can use to pour all sorts of thought-out design ideas into a computer screen.

a. Digital Illustration

Computer programs such as Procreate, Adobe Illustrator, Affinity, and the Paint tool sai obtain illustrator by using digital pencil or brush tools. The tool can be used to create sketches and drawings, similar to those made using pencil and paper traditionally.

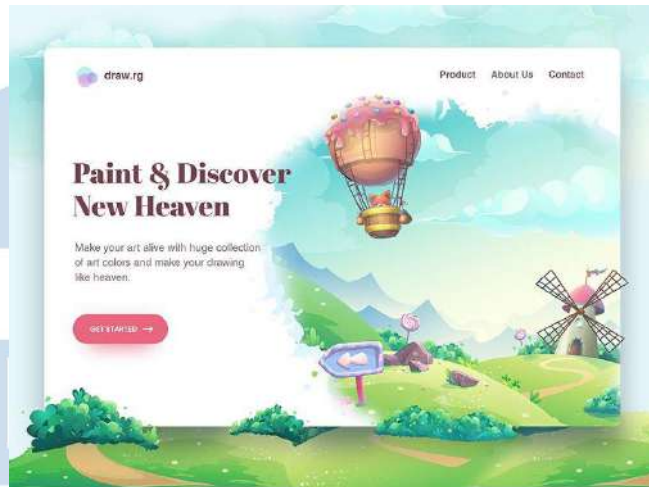


Figure 2.22 Digital Illustration Implementation in Website
 Source: <https://id.pinterest.com/pin/311381761733653631/>

There are various variations of brush settings to choose from as well as plugins to download that make illustrators create a wide variety of textured Brushes with a wide variety of effects. But even with all the advantages, many illustrators choose the traditional way of drawing, which can express themselves better with the qualities that are in traditional illustrations.

b. Vector Illustration

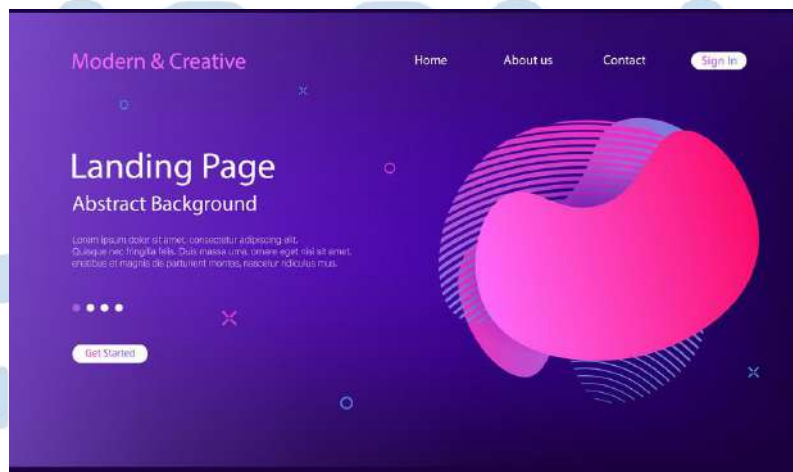


Figure 2.23 Vector Illustration Implementation in Website
 Source: <https://www.vectorstock.com/royalty-free-vector/website-landing-page-template-abstract-background-vector-26169826>

Vector illustrations are very popular among graphic designers, which are created from computer programs for digital illustrations as mentioned in the previous paragraph. Vector illustrations use computer programs such as Adobe Illustrator that produce images that resemble photography or scanned objects.

2.3 Colors

Colors can elevate the atmosphere, describe reality, or codify information. Designers using colors in addition to highlighting can also camouflage an object. Colors serve to distinguish and connect, to clarify and hide. Likewise, colors have different meanings depending on the culture.

Color carries different connotations in society, for example, white represents purity in the West, but the color has the meaning of death according to eastern cultures. The red color worn for brides at weddings in Japan, is considered erotic from European and American cultures.

2.3.1 Basic Color Theory

In 1665, Isaac Newton discovered that a prism could separate light into a spectrum of colors, namely red, orange, yellow, green, blue, indigo, and violet. Any color that is side by side with each other on the spectrum or adjacent to the color wheel can be regarded as analogous. Deciding to use analogous or contrasting colors will have an impact on the visual energy and atmosphere of any composition.

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2.3.1.1 Color Wheel

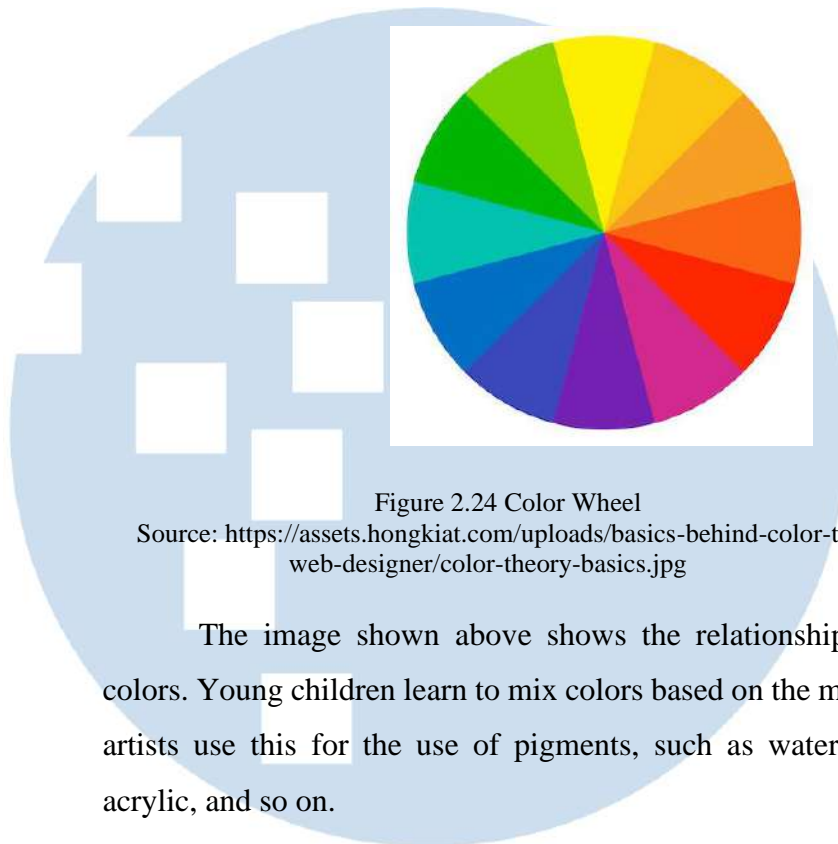


Figure 2.24 Color Wheel

Source: <https://assets.hongkiat.com/uploads/basics-behind-color-theory-for-web-designer/color-theory-basics.jpg>

The image shown above shows the relationship between colors. Young children learn to mix colors based on the model. And artists use this for the use of pigments, such as watercolor, oil, acrylic, and so on.

2.3.1.2 Primary Colors



Figure 2.25 Primary Colors in Website

Source: <https://i.graphicmama.com/blog/wp-content/uploads/2019/03/08113829/Inspiring-Website-Color-Schemes-blue-orange-and-yellow-website.png>

Blue, red, and yellow are primary colors, they cannot result from mixing colors. All other colors result from mixing colors.

2.3.1.3 Secondary Colors



Figure 2.26 Secondary Colors in Website
Source: <https://assets.hongkiat.com/uploads/basics-behind-color-theory-for-web-designer/color-theory-basics.jpg>

Secondary colors such as orange, green, and purple colors are produced from two primary colors mixed together.

2.3.1.4 Tertiary Colors

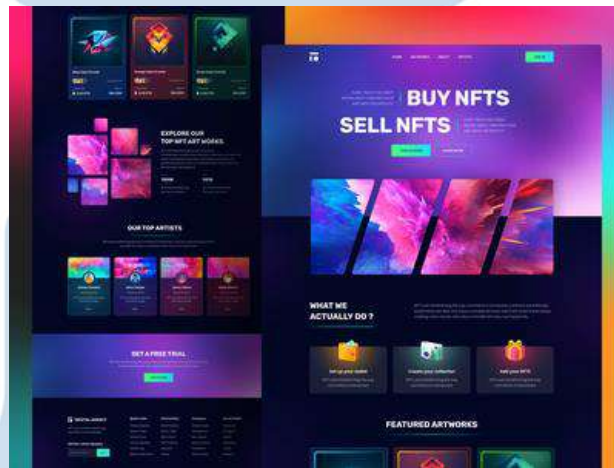


Figure 2.27 Tertiary Colors in Website Design

Source:

<https://cdn.dribbble.com/users/6657629/screenshots/17650269/media/d0b036bb43daa246d6a6b9efa2627a7a.png?compress=1&resize=400x300&vertical=top>

Tertiary colors are made of a combination of primary and secondary colors. Such as Amber, violet, magenta, and so on.

2.3.1.5 Analogous Colors



Figure 2. 28 Analogous Colors in Website
Source: <https://www.volusion.com/blog/color-theory-applied-to-the-web/>

Analogous colors are color schemes built from hues adjacent to each other. Has a slight chromatic difference.

2.3.1.6 Color Modes

The surface absorbs certain light waves and reversely reflects back to the color receptors (cones) in the eye. Reflected light is visible light. The primary colors that can be seen are red, green, and blue. Light systems are called "additives" because these three primers together create all the colors in the spectrum. The two main color modes in the design world are CMYK and RGB.



Figure 2.29 CMYK(left) & RGB(Right)
Source: <https://plumgroveinc.com/what-is-cmyk-color/>

CMYK is used for the printing process. On the other hand, painters use the basic colors of the color wheel to make a guide to color mixing. Printing ink uses different sets of colors, namely cyan, magenta, yellow, and black. Such color combinations are ideal for producing a range of color colors from photographs.

RGB is a system that graphic designers use to design inside layers. By mixing red, green, and blue colors, you will get the color results on the spectrum. With a combination of all RGB colors can produce white. Black color appears if no light is emitted.

2.4 Typography

A typeface or typeface is the design of a set of characters from a consistent visual combine. These visual properties create an important character of a typeface, where the typeface is still recognizable even though it has been modified. A typeface includes letters, numbers, symbols, marks, punctuation marks, and accents. Most types of terminology are based on the term metal type, in the printing process where the type of mold is made of a three-dimensional piece of metal. Previously, metal types only had one type of typeface complete with certain characters, numbers, symbols, and typeface signs in one size, weight, and style. However, now the use of letters can already be made of digital so that the typeface is not limited. (Landa, 2014)

2.4.1 Font Type Clarification

Typefaces have eight classifications, namely old style, transitional, modern, slab serif, sans serif, blackletter, script, and display.

U N I V E R S I T A S
M U L T I M E D I A
N U S A N T A R A

2.4.1.1 Old Style/Humanist

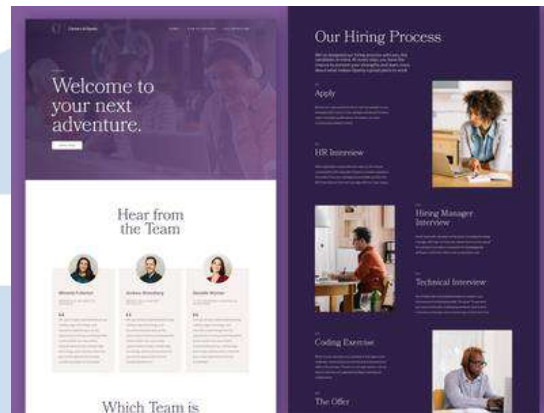


Figure 2. 30Old Style Typeface (Garamond) in Website

Source: Robert Slimbach (1989)

<https://dribbble.com/shots/15548973-Openly-Careers-Interactive>

Old style is a Romance typeface, created at the end of the 15th century, a direct derivative of the letterform drawn with a wide-eyed pen. Characterized by angles, parenthetical serifs, and pen pressure leaning towards one side, some examples of such typefaces are Hoefler Text, Garamond, Times New Roman, and Caslon.

2.4.1.2 Sans Serif



Figure 2.31 Sans Serif Typeface in Website

Source: <https://designmodo.com/websites-handwritten-fonts/>

The typeface was characterized as a letter for which there was no serif section, and was introduced in the early 19th century; Examples include Futura, Helvetica, and Univers. Some letterforms

without serifs have thick and thin lines, such as Grotesque, Frutiger, Universal, Futura, and Franklin Gothic. The sub-categories of Sans Serif letters include Geometric, Grotesque, Humanist, and so on.

2.4.1.3 Script



Figure 2. 32 Script in Website Title
Source: <https://designmodo.com/websites-handwritten-fonts/>

This typeface most resembles handwriting. The letters are usually oblique and connected to each other. The script typeface can be written with a chiseled pen, flexible pen, pointed, pencil, or brush; Examples are Shelley Allegro Script, Brush Script, and Snell Roundhand Script.

2.4.1.4 Display

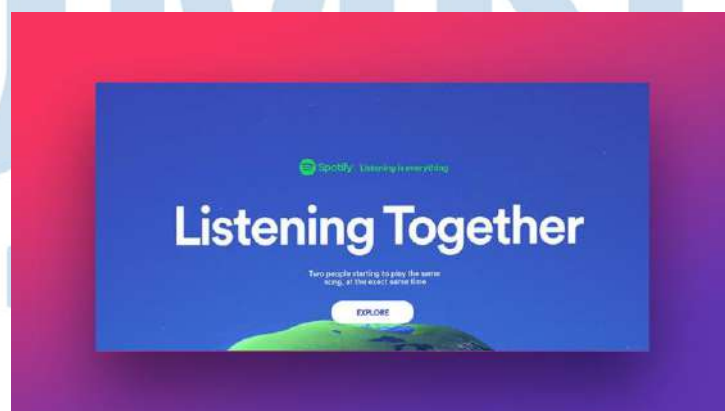


Figure 2. 33 Display Typeface in Website
Source: <https://threerooms.com/wp-content/uploads/2019/05/Display-font-examples.jpg>

Display typefaces that have a larger size usually serve for Title writing and it will be more difficult to read with that typeface as a text type. The letter is usually made into a handmade decoration, and can be included in any classification.

2.5 Grid and Layout

The grid is used to tidy up information and space for the target audience, and plan a design in the entire project. Plus, a grid is a way to maintain a layout. (Beth Tondreau, 2009)

2.5.1 Grid Element

According to the Essential layout book from the author (Beth Tondreau, 2009), there are 6 main components of a grid, namely; margins, columns, spatial zones, flowlines, markers, and modulee.

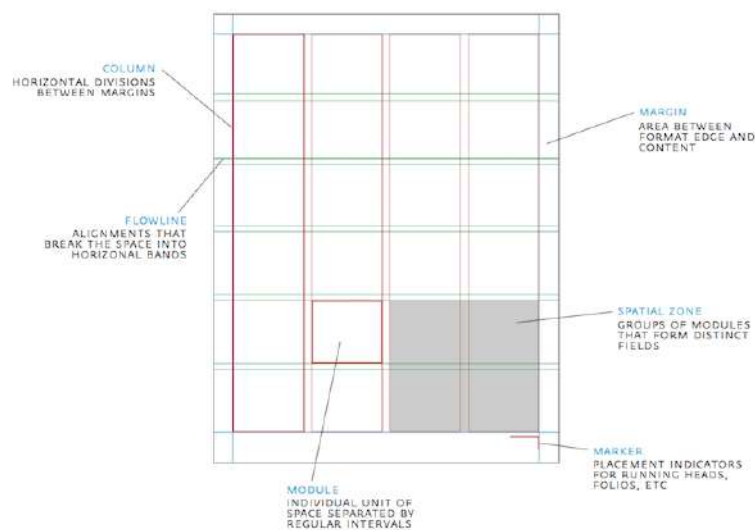


Figure 2.34 Grid Elements

Source: <https://radversity.files.wordpress.com/2014/07/grid-content.png>

2.5.1.1 Margin

Margin is a tool for buffering content, margin represents the amount of space between the area to be cut, that is, including the

gutter, and the content of a page. Margins also serve as a container for secondary information, such as captions and notes.

2.5.1.2 Flowlines

Flowlines are rows that divide a room into several small, horizontal parts, which serve to give direction with the use of elements and space for the target audience on a page.

2.5.1.3 Column

A column is a grid on a vertical section that can hold writing or an overview. The width and number of a column depends on the page or screen of the design, and also depends on the content covered.

2.5.1.4 Spatial Zone

A spatial zone is a group of columns and modules that can form a specific area for writing, advertising, images, and other information.

2.5.1.5 Markers

A marker helps the reader to navigate a document. Helps show some material that exists in the same location, including icons, page numbers, headers, and footers.

2.5.1.6 Module

A module is a consistent division of the area of a room, which provides a consistent and repeatable grid. The combination of different modules can produce rows and columns of a certain size.

2.5.2 Basic Grid Diagram

There are different kinds of grids in order to make certain designs, including websites. Here are a few types of grids and how it is implemented in websites.

2.5.2.1 Single-Column Grid

Single-Column grids are usually used for continuous writing, such as, essays, books, or reports. The main feature of such pages is a fairly large number of writings. This type of grid will look less intimidating and fancier than the type of grid with more than one column. Make it suitable for picture books or catalogs.

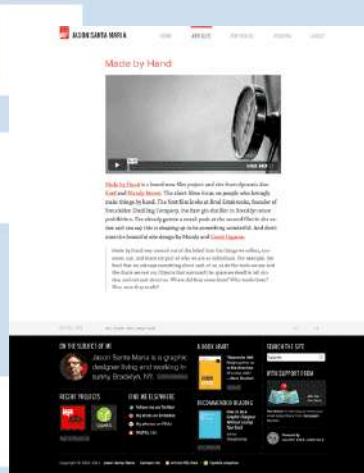


Figure 2. 35 Single-Column Grid Website
Source: <https://vansedesign.com/web-design/grid-type-examples/>

2.5.2.2 Two-Column Grid

Two-Column grids can be used to organize multiple posts or to separate two different pieces of information into two different columns. The two columns in the grid can be adjusted in width to be the same or different.

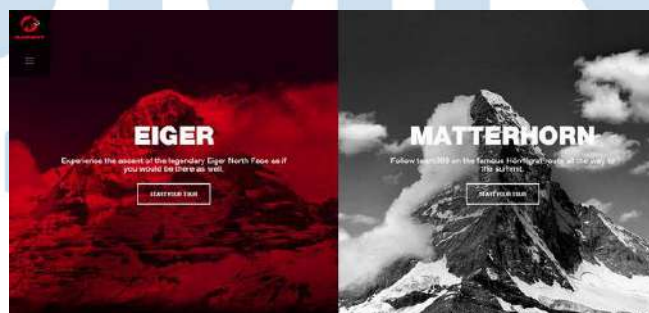


Figure 2. 36 Two-Column Grid in Website Implementation
Source: <https://designmodo.com/two-column-websites/>

2.5.2.3 Multicolumn Grid

By using multicolumn grids, it will provide more flexibility than single or double column grids. The use of more than two columns will be useful for creating a website that tidy up a lot of information, such as stories, videos, and advertisements. Multicolumn grids can also be used for magazine layouts.

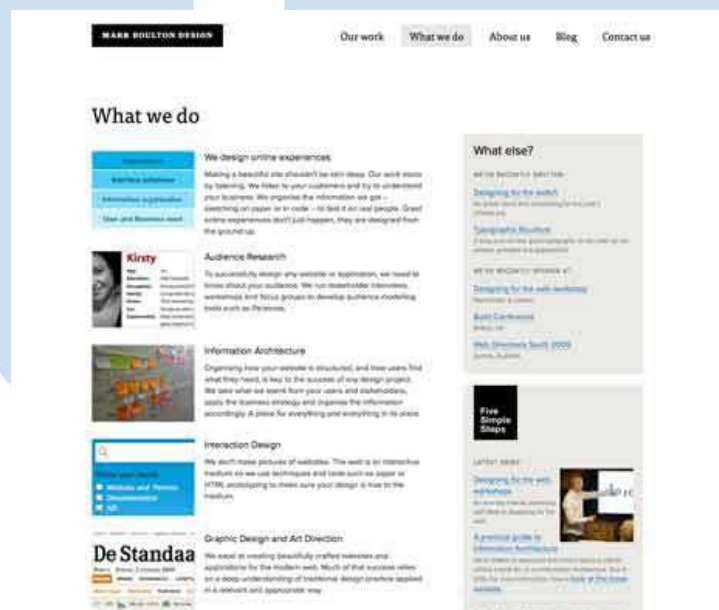


Figure 2.37 Three-Column Grid Website Example
Source: <https://vansedesign.com/web-design/grid-type-examples/>

2.5.2.4 Modular Grid

Modular grids are best at arranging complex information such as calendars, newspapers, tables, and charts, for example. The modular grid is made of a combination of vertical and horizontal columns that can be seen in the small square shape.

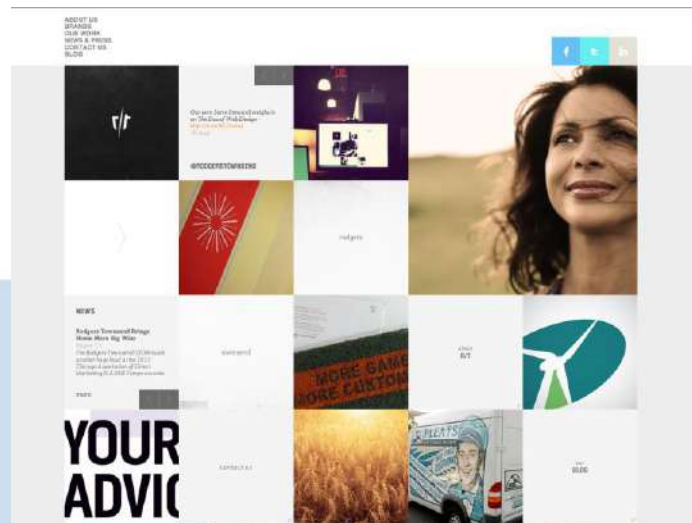


Figure 2.38 Modular Grid and Website Example
 Source: <https://vansedesign.com/web-design/grid-type-examples/>

2.5.2.5 Hierarchical Grid

Hierarchical grids divide its pages into zones. Often the grid is the result of a horizontal arrangement of columns. The layout is often used for simple websites, to share various information to make it easier to read when continuing to the page below it or the next.



Figure 2.39 Hierarchical Grids and Website Example
 Source: <https://vansedesign.com/web-design/grid-type-examples/>

2.6 Information Media

According to Ralph E. Hanson from a book called "Mass communication: Living in a media world" (2019), Communication is "Social interaction through messages." With a simpler explanation, communication is the way people interact with the rest of the world through spoken words, writing, gestures, music, paintings, photographs, or dances. The important thing about communication is a process, not a static thing. Communication is an interaction carried out by an individual, group and or an instruction to share an idea. (Hanson, 2019, p.48)

2.6.1 Printing Media

Printed medias can be used for many factors, most of the time it is functioned to give information for educational purposes. A few of other specific types would have a different purpose.

2.6.1.1 Books



Figure 2.40 The Fault in Our Stars Book
Source: John Green (2012)

Books are a source of entertainment, culture, and ideas for society and have become a long-lasting medium of controversial information compared to other media. Book publishing also has a big role in the business world which is supported by buyers or book enthusiasts. Internet usage is an important place. Online bookstores like Amazon.com can sell digital-based books for buyers to

download, so sales are unlimited. Electronic book readers or E-books have become very popular in distributing a book, especially textbooks.

2.6.1.2 Magazines

A magazine is a medium that contains a variety of interesting article content. Usually, magazines are targeted to a specific audience and benefit from advertising, subscriptions, and kiosks. Compared to men, one of the largest categories of consumer magazines is the one targeted at Women. Such as beauty, fashion, and lifestyle magazines. For magazines targeted at men, such as Field & Stream and Motor Trend, it fits the hobbies of most men.



Figure 2. 41 Examples of Magazines
Source: <https://pin.it/j1o1TbU>

Magazines in the 21st century continue the wide variety of trends that make them successful, including in building relationships with readers, adapting to change, being supported by advertisers, and defining key issues within society. The magazine continues to be successful by expanding content with digital versions.

2.6.2 Electronic Media

In the 21th Century, electronic medias are often used more than printed medias, since it does not have limited space or materials such as books and papers.

2.6.2.1 Online Media

Currently, Internet is in the process of forming oneself as a new medium for mass communication, and helps each individual to be able to comment on anything that is seen or heard. The difference between the sender and receiver in the Internet is not much different. People can play video games, can interact with others who play the game, and even while interacting with their players.

2.7 Interactive Digital Media

According to Julia Griffey's experience (2020) where when providing information to someone that Julia teaches interactive digital media, that person tends not to know what interactive digital media is. The most suitable definition for interactive digital media is a computer-based experience that facilitates interaction between the user and the device. In other words, whatever the user does on a device such as a computer or screen, the device will do something back to the user.

An interactive digital media application can be a website, a traditional kiosk, an application that exists on a mobile device, a video game, or a computer/sensor-based, physical experience in a museum or public space. All of them are made from a variety of different program languages, used from a variety of hardware, and have their own purpose.

2.7.1 What Makes Interactive Media Different from Other Media

The easiest answer to this is interaction with the user. Whenever a user has experience with different media, for example, viewing photos, reading writing, watching videos, and listening to audio, the media does not respond to the user. Although these forms of media can trigger response

from the user, but it does not mean that the user has interacted with the media.

2.7.2 Types of Interactive Media

Since interactive digital media was created, hardware has evolved and added new forms, uses, and modes of interaction, thus influencing the way people communicate, shop, learn, and entertain.

2.7.2.1 Traditional Kiosk

A kiosk is located in a specific location, and provides an interactive (usually touch) screen-based experience designed to provide instruction, increase productivity, facilitate communication, provide entertainment or enable transactions specific to its location. Interactive kiosk was the first form of interactive media ever, a few years before the world wide web was created.



Figure 2.42 Map of Malls

Source: <https://acquiredigital.com/wp-content/uploads/2020/08/Wayfinder-Smart-Hub-1.jpg>

One example of an interaction kiosk, which is a map kiosk that is usually located in a mall. Aims to provide directions and notify specific locations.

2.7.2.2 Website

A website is a combination of interrelated web pages, all included in the same domain name, displayed in a web browser and accessible from any computer with an internet connection. By the end of 1990 e-commerce sites had grown rapidly, so social media platforms and blogs appeared on the world wide web.



Figure 2.43 Genshin Impact Website
Source: <https://ys.mihoyo.com/main/>

Modern websites have evolved significantly. Because websites can be used on a variety of devices, most websites are designed to be responsive, in other words, the layout of content and layouts based on the device used.

2.7.2.3 Mobile App

Mobile applications (or apps) are a form of interactive digital media that emerged after the existence of modern smartphones. The application is different from the desktop application which has programs such as Microsoft Word on the computer, and the web application. Because mobile applications are specifically designed for smartphones, tablets, or clocks that are usually designed for specific tasks. There are applications installed from a device such as a web browser, or an email, but for other applications it can be purchased and downloaded through the application market. For example, the app store on iPad and iPhone.



Figure 2.44 Application Icon Display
Source: <https://pin.it/19fD2MC>

Apps have become popular since they first appeared because they usually do not cost a hefty amount, are easy to download, update, and delete. Apps can also be developed and sold to anyone with a smart idea and little programming knowledge that ensures continuous innovation and always adds something new to the app store. One of the advantages of using the application, especially for companies, will be given the opportunity in the form of notifications such as coupons and reminders for business benefits.

2.7.2.4 Video Games

A video game is a game that runs from a mobile device, computer, or special device where players interact on the system and use several types of controllers, sensors, or directly touch the screen. Video Games are now accessible on many devices. Examples include games on a computer, through a web browser, on a smartphone and through a watch.



Figure 2. 45 Yakuza Computer Games 0
Source: Sega, Ryu Ga Gotoku Studio (2015)

The types of games also vary. There are some games that have a long storyline and can take a lot of time to explore the game. Augmented reality (AR) games blend into the real world, and virtual reality (VR) games immerse players in the game world through visualized play.

"Casual games" are simple enough to play via a smartphone while waiting for something. Now, games are not only played for entertainment, but also used for educational purposes for students and even professionals. Games are a thriving industry and have an interesting opportunity.

2.7.2.5 Physical Installations, Exhibitions and Performances

One place suitable for interactive media of physical installations is the museum, where exhibition designers are interested in creating experiences with the technology to capture the attention of entrants. In this new generation, interactive exhibits encourage visitors to interact with content innovatively.



Figure 2. 46 Illusion Video and Sound Immersive Interactive Art Installation
Source: Laia Cabrera dan Isabelle Duverger (2019)

As can be seen in Figure 2.48, One example of interactive media in the exhibition is the Immersive interactive art installation, created by Laia Cabrera and Isabelle Duverger in Los Angeles. The human image displayed on the screen follows the movements of the visitor.

2.7.2.6 Non-Screen-Based interactive Experiences



Figure 2. 47 Amazone Echo
Source: https://likekhao.ru.com/product_tag/70380134_.html

Innovations that are still included in interactive digital media are non-screen based, based on experiences that have different purposes and are used according to certain contexts. One example of such interactive digital media that is practical is Amazon's Echo. Echo can present different types of media based on what the user says.

2.8 Reptile

According to (National Geographic, 2012), Reptile animals are vertebrates that breathe with O₂, have skin made of bone plates, scales, or from both. Such reptiles include crocodiles, turtles, lizards, snakes, and turtles. Such reptiles molt regularly and their metabolism depends on the temperature of the environment in which the animal lives.



Figure 2.48 Photo of Leopard Gecko
Source: https://en.wikipedia.org/wiki/File:Eublepharis_macularius1.jpg

Unlike mammals and birds, reptiles do not need to maintain body temperature internally. Since the reptile is hairless, it will be difficult for it to survive in the cold, and without sweat glands or unable to pant, the reptile also cannot cool down from hot temperatures. But on the other hand, to maintain a stable body temperature Reptiles can avoid heat by sheltering and sunbathing if the cold suits their needs. Because reptiles are cold-blooded, they need a hotter environment and during winter, reptiles tend to be more inactive because cold temperatures make their metabolism slower.

Reproduction of reptiles also depends on air temperature. Only pythons and boas give birth to offspring, but other species lay eggs and then leave the nest. It will take several months for the eggs to hatch. The temperature of the soil is also important for determining how many male or female hatchlings there are. Young reptiles can, walk, slide, and swim within a few hours after birth.