

# IMPORTANCE OF USABILITY FOR PRINT MEDIA FOR INFORMATION DISSEMINATION

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## Abstract

Usability can be defined as the ease with which people can understand the intended information given in any source. It is important to consider user experience in mind while designing any product user might use. If there is difficulty while reading or while interpreting the information, users usually lose their interest. Thus, if the main goal of a document is to provide users with maximum understanding, Usability should be taken into account. According to Jakob Nielsen [1], usability constitutes of five components: Learnability, Efficiency, Memorability, Errors and Satisfaction. And thus, while designing any print media or printed document, taking these factors into account can provide fruitful intended result.

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## 1. INTRODUCTION

According to oxford Reference, print media can be defined as “any written or pictorial form of communication produced mechanically or electronically using printing, photo-copying, or digital methods from which multiple copies can be made through automated processes.” [1]. When comparing print to digital media, it is easy to assume that in today’s society digital is always better. But one certainly cannot ignore the significance of print media. It can encompass starting from newspapers, magazines, direct mails to posters, pamphlets, banner, brochures etc. The primary purpose of all these mass media is to provide their users with information. In broader sense, these medias are used to communicate knowledge, emotions, understanding and education. Therefore, the purposefulness is to create the media in such a way that it can help to deliver the message effectively and efficiently.

Nielsen Norman defines the usability “as the quality attribute that assesses how easy user interfaces are to use.” [2] He has defined usability in terms of accessibility in terms of Web pages. Print media is not an interface to be precise. Although, if we consider the information that is present in the print media as something the user’s brain interact with and tries to interpret which essentially is the case, we can say that print media is an interface between the printed data and the human brain. The rules and usability guidelines developed for web pages and digital media can therefore also be extended to the print media.

This leads us to establish the norms for usability for such print media. According to Jakob Nielsen [1], usability consists of five components: Learnability, Efficiency, Memorability, Errors and Satisfaction.

In one way or another like we use websites and utilize the functionalities it provides, print media also aims to provide functionalities such as to inform, to educate, to entertain, to

- **Learnability:** How easy is it for users to accomplish basic tasks the first time they encounter the design?
- **Efficiency:** Once users have learned the design, how quickly can they perform tasks?
- **Memorability:** When users return to the design after a period of not using it, how easily can they reestablish proficiency?
- **Errors:** How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
- **Satisfaction:** How pleasant is it to use the design?

Figure 1: 5 quality components of Usability

report, to promote ideas etc. Therefore, we can also describe these five usability components in terms of print media.

## 2. LITERATURE SURVEY

In “Developing Effective Marketing Materials: Brochure Design Considerations” [3], Amy defines brochures a type of print media, as a crucial component for the businesses to implement their marketing strategies. They play an essential role for gathering the attention and promoting the product to the prospective audience. Usually they last for more than a year, a lot of planning and development is required while designing them. So, the typical components of the brochures are: Headlines, subheading, Body copy, signature, Disclosures and terms and conditions, plus some illustrations. While This constitutes the content of the brochures, designing the brochures follows “The rule of thirds”. When a brochure’s front cover is done correctly, it will capture the attention of a reader by appealing to their needs. She also defined some guidelines such as using two type of fonts: San serif font such as Arial for headlines and a serif font like Times

New Roman works best for text located in the body copy. Three type of font size for example, headlines font size to 24 points, subheadings at 18 points and copy text at 12 points. Also, the main focus should be to present information with proper white spaces between the elements and not crowd the brochures with too many visual components. The paper also has information about what to include in all these 3 folded papers, in order to deliver the data for effectively.

In “The influence of message format on the effectiveness of print advertisements for tourism destinations” by Alain Decrop, talked that the message format is crucial in developing effective advertising campaigns.[4] According to Alain, print advertisements consists of picture, logo, text and headline. They found that show “that picture and text are the prevailing elements, while logo and headline are of marginal importance. Pictures are especially effective in attracting the consumer and arousing a behavioral intention, whereas text is most powerful in conveying information.” [3]

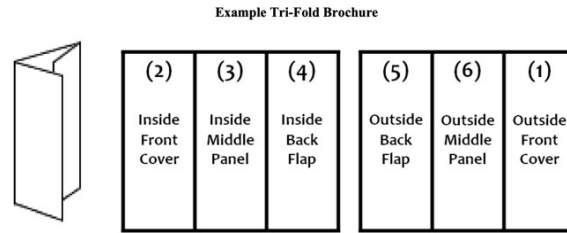


Figure 2: Example tri-fold brochure

Table 2: Relative importance weights (%) for the three dependent variables						
	Picture	Logo	Text	Headline	Total	<i>n</i>
Attraction	78.77	1.03	5.40	14.80	100	123
Information	21.18	1.50	72.96	4.36	100	126
Intention	57.36	3.58	30.19	8.87	100	118

Figure 3: Aggregated relative importance weights of the four ad components for the three dependent variables (Attraction, Information and Intention)

According to “Memory Recognition and Recall in User Interfaces” by Raluca Budiu, and the 10 usability heuristics advises promoting recognition over recall. “Recognition refers to our ability to “recognize” an event or piece of information as being familiar, while recall designates the retrieval of related details from memory.” [4] The memories are said to be organized as chunks (interconnected units) and each chunk can be described by its activation. The activation of this chunk is influenced by three factors: practice recency and context. By context, it means what is present which has the potential to grab the user’s attention. Therefore, Context can influence the processing of memory data. While recall requires fewer cues for chunk activation than recognition, having more cues helps in spread of relevant activation which helps in easy retrieval of memory. In context of User interface, buttons, navigation bars and direct information is provided for the user to promote the recognition. Thus, making the whole user experience a little less hectic for our brain.

### 3. DISCUSSION

Print medias comprises newspapers, magazines, brochures, pamphlets, posters, banners etc. We can always define the 5 components of usability with respect to each of these print media. They do have a sense of similarity as they are all combination of text, headlines, visual components like pictures etc. Therefore, they must share some “rule of thumbs” with each other. There might a possibility of having some exceptions and some media constraint rules (like brochures have), but the primary goal of every one of them is information dissemination

to its user.

The usability components have different as well for different print media. For example, In case of a poster, we may define them as

- Learnability is attained when a user is easily able to understand the information presented
- Efficiency is when user have learned the information presented in a particular design, they can make use of it.
- Memorability is whether users can remember the contents of the poster after a while or not
- Errors in terms of poster/flyer can be how a user can interpret wrong information from the given data
- Satisfaction means how pleasant or delightful the design of the poster is.

Overall, all of them share the same essence of these factors defined for posters. But how do we make sure that these quality criteria are full filled? Working on each one of these 5 quality components can make sure that user feels overall satisfied while trying to access these documents.

One of the ways to ensure that learnability, efficiency and memorability is maintained by working on the design of the print media/ print document. There can me various methodologies applied while forming the framework or design. “Principle of design” [5] should be taken into account as they rely on the experience and understanding of the conventions of the user. These includes similarity, contrast, proximity, alignment, order and enclosure. While the exact rules may differ for different print media, the notion of principles of design is shared by all of them.

Similarity is used to show that the design object which can be a component of the print document, are alike in kind or function. They give the idea of likeness to different objects to the user and allows them to interpret the given information in a certain maybe unique way. If this design idea is implemented successfully, it increases the learnability of the print document overall. It may allow some users to understand the information more easily and comfortably. To make sure that we are able to implement the notion of similarity, one can make sure to pay attention to these qualities of design objects: shape, size, color, value, size and position. They can even make combination of these variable to club similar object. “For example, print documents often use similarity in their design of page numbers.” [5] In case of a brochure, they follow certain design guidelines and are consistent with them on every flipped page. This helps the user to make better use of the presented data and they tend to go through the brochure with more ease.

While similarity is used to give the essence of likeness of objects, contrast on the other hand shows the difference and creates emphasis. Contrast provides the user with the information which is supposed to stand out from the rest. It’s supposed to catch the attention of the user. This may help improve the learnability as well as efficiency and memorability.



Picture A



Picture B

In case of picture a, contrasts help catch attention to the date in the poster. It helps in remembering afterwards as such kind of difference in color in posters tends to make user recall easily. While in picture b, the white colored sale tends to create a sense of contrast from the rest of the text. It catches attention of user and prompts user to look at it. The contrast here helps to disseminate the initial information the poster is about: a Sale. While the contrast in the bottom to highlight the date and day also helps in remembering it. As the user is most likely to look at the word sale creating color contrast serves the purpose of learnability, efficiency and memorability. The notion of Satisfaction may differ from person to person, what looks good to the eye and what not. But if a person is able to implement learnability, efficiency and memorability in a positive sense with less errors overall, it may be implied that it may satisfaction in a positive way. The next principle of design is alignment, which shows connection and coherence between individual objects. If they are implemented in an accurate fashion, it helps to improve the usability by organizing numerous sections of a page of print document, create a more coherent readable system for the user. In broader sense, it helps to increase the learnability and memorability of the document at the same type tends to have less error.

Moving on to the next design principle: proximity which is self-explanatory to give the idea of grouping and belonging, gives the idea of looking at things and understanding the relation between them. For example, in picture c, the spacing between the second headline and text of first headlines gives the idea of proximity between second heading and its content. Thus, allows user to see the paragraph and the spaced headline as a single composite unit. While picture D is difficult to understand and aesthetically not pleasing to look at. With little spacing between objects, it may fail to serve its purpose. The positioning of all the elements looks little confusing and with different font sizes, it may fail to serve user with providing all the aspects of usability.



Picture C



Picture D

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## Alignment

### Good

Today I went to the store to buy an apple for my grandmother.

### Bad

Today I went to the store to buy an apple for my grandmother.

Last one is the order: which mainly focuses on the sequence and the importance of the different objects. Users tend to inculcate certain pattern while going through documents whether printed or online. For example, in case of brochures, the last page is generally for contact information. So out of habit people turn to that page for contact information. Now if the front page of a brochure is designed that way, it may create confusion and a sense of strangeness. Making use of these user adapted patterns helps in improving the efficiency and learnability of a print media. If a user is familiar with the basic design, it saves a lot of time for the designer to create a readable document.

#### **4. CONCLUSION**

These principles of design are one of the concepts which create a building block for the components of usability. While the guidelines may differ for different platforms of print media, the goal is same: to achieve usability. The importance of textual or visual information is augmented with keeping the five components of usability in mind. Thus, to get closer to the goal of information dissemination, designing should be one of the priorities. It affects the way user can interpret and understand the presented information. Thus, it is important to provide user satisfaction with the intend to communicate information.

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