



Paper vs. Pixel Reading

Where paperless media stands in terms of preference, usability and influence over printed media

White Paper

Introduction:

With the explosion of the Web as an information source marketers along with newspaper and book publishers are asking, “Is print still relevant?” This paper takes a look at the way people of all ages are consuming information and attempts to answer the question, “Which is best for information dissemination and absorption – print or online?”

How do people read the printed word? Do people absorb more of what they read in print? Do they read print slower than when they read online material?

How do people read online? How much of what people read online is absorbed and retained? When do people prefer to go online for information?

Which is used more often for information gathering – print or online – and why?

Do demographics matter? Do young people tend to reach for the mouse when seeking information and do older folks reach for a printed medium? Or, does age matter in the age of the Internet?

Paperless Reading:

While the existence of paper can be traced back centuries ago, the emergence of pixelated documents is comparatively an evolving invention. Paperless documents continue to grow in an exponential rate with the rapid breakthroughs in modern technology - faster computer processing power, ever expanding data storage size, fast electronic document sharing, enhanced vision monitors, improving word processing software, etc, to just name a few. These digital documents, even though they serve the same purpose as paper documents, have a wide array of characteristics far different from traditional documents.

Characteristics of on-screen reading:

The first thing to consider while comparing pixelated documents to paper documents is the way people read them. Jakob Nielsen, a webpage usability expert, has studied how people read and receive information from computer screens. In his study, by tracking various readers' eye movements, he found that people often read a web page in "F-Shaped Pattern."¹ The pattern follows with viewers reading across the upper part of the content area first. Next, the viewers move down the page and read the second horizontal line, which is shorter than the first one. Finally, the viewers scan the rest of the page and usually only read the content on the left side in a vertical fashion. He also found that 79% of web users scan rather than read web pages states Nielsen, with readers focusing mostly on the left hand titles and navigation links.²

This contrasts greatly with the way people generally read paper documents where they are more thorough. Upon studying why on screen reading habits differ, the Nielsen study mentions four reasons – reading from a screen is tiring, each on screen page competes with millions of other pages for a user's attention, the web is an active medium where people prefer to click and interact instead of just reading passively. Also, as people are getting busier they don't have the time or the patience to sit in front of the screen and read.

Further studies into how people absorb the information they read on screen shows that readers are 10% – 30% slower when they read on screen.³ Also, readers skimmed paper books 41% faster than skimming texts on screen. However, the comprehension for on screen reading was slightly higher in comparison to books.⁴

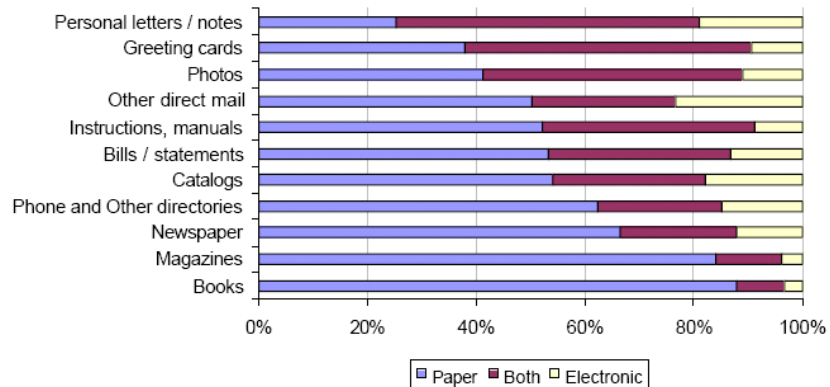
Besides these, several other factors also come into play in characterizing how viewers read the information on screen, factors such as the screen's image quality, the length of text (generally people reading online tend to look for short passages⁵), the purpose of reading (people looking for a fast solution or detailed comprehensive information), etc, to list a few.

Preference:

With the advent of the digital age, fast sharing of information has made most correspondence digital. However, paper still exists and people haven't given up on using paper. In fact, electronic mail has raised the use of paper in offices by 40%, as people tend to prefer reading printed documents instead of on screen.⁶ What does this mean? Do people prefer reading paper after all? The answer varies greatly depending upon many variables.

A 2003 study found that for a wide range of applications, consumers continued to prefer paper. However, depending on the application there's also a mix of preference for both the paper and electronic media. It was noted that consumers showed no preference for one application in electronic media. Only one type of information – direct mail – had a higher preference for electronic versions vs. print (23.5% of consumer preferred electronic media for direct mail.⁶) See the chart below.

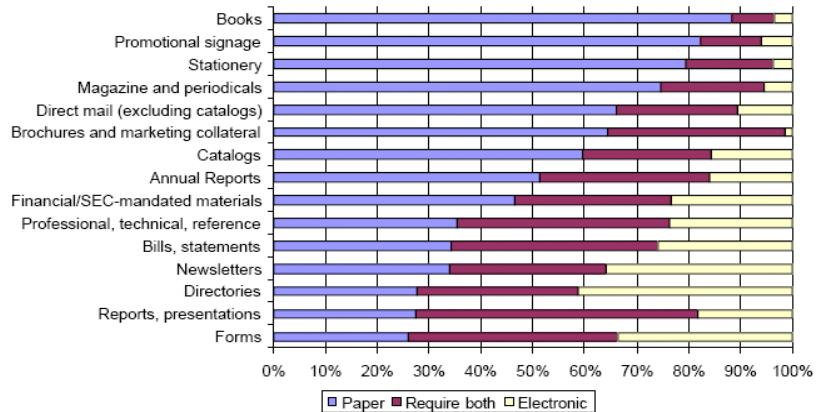
Figure 1. Consumers Preferred Method of Receiving Documents



Source: "The Future of Paper", InfoTrends/ CAP Ventures (2003).

The consumer's perception of the effectiveness of electronic and paper medium showed the same results as their preference. Thus, the preference for one over the other may be influenced heavily by the consumer's perceived effectiveness.⁶

Figure 2. Print Customers Perception of Most Effective Media by Application



Source: "The Future of Paper", InfoTrends/CAP Ventures (2003).

The following variables are studied in terms of preference:

Demographics:

It is true that the younger generation (34 years and younger) prefer electronic media more than the older generation. A survey done by the Lexmark Company found that 48% of respondents over age 55 print emails, compared to 24% of 18-34 year-olds and 30% of 35-44 year-olds.⁷ The younger generations' familiarity in dealing with digital documents since a very early age makes them more comfortable over older people, who prefer print over digital files.

Purpose:

When considering preferences, the purpose of the reading greatly influences the reader's choice of medium. A study done on consumer preference shows that 93% of surveyed households preferred to receive financial documents on paper and by mail.⁶

A 2009 study commissioned by a joint venture from IBM and Ricoh show that consumers value personalized marketing on their documents online but even more so on paper, including targeted promotions on banking, utility and mobile statements.

Even younger consumers prefer paper when it comes to financial information. The study showed that 70% of consumers age 25-34 who receive bank statements read them on paper compared to 63% of consumers age 50-64. The study also found that 74% of consumers thought that personalized, relevant messages on paper are useful.⁸ The Lexmark Survey further showed that younger respondents were more likely than older respondents to save printed financial documents (62% of 18-34 year-olds versus 47% of those over 55).

Conclusion:

The studies reveal that paperless media is gaining its share of readership. Although the younger generation is embracing digital media slowly but steadily, digital media hasn't completely replaced paper media.

Certain values like ease of reading, higher reader involvement, credibility as well as ease of storage make paper a preferred medium.

The preference towards digital files is higher for low involvement reading such as emails, announcements, greetings, etc. However, for high involvement reading such as financial documents, detailed reports, etc, people still prefer printed copies. These studies show that people prefer printed materials because they are seen as being more personalized. Printed materials also have a certain emotional appeal to consumers.

Thus, the best method for reaching out to customers needs to be a balanced mixture of both the electronic as well as the paper media. While electronic media are preferred for easy reading and as a reinforcement tool, paper still dominates people's preference in terms of documents that carry important information or documents that require the reader's extra attention.

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