The "Less Paper" Library and Its Effects on Environment, Economy and Efficiency

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Abstract

During the last 40 years, people began talking about the option of a "paperless library". The concept of electronic format has been emerging out, i.e., everything is available on the internet; everything is now in electronic form so there is no need of paper. It coincided with the advent of the personal computer, and the hope was that all documents could be processed electronically and that paper would become inappropriate. Actually, paper utilization is still increasing, elevated to extremely high levels. Paper continues to predominate in most of the activities that involve information work, knowledge work, reading and collaboration. New ways of using paper are being devised daily. Vast use of paper causes a wide range of ecological damages. So by using less of it, we can push many environmental buttons at once like we can reduce our force on forests, cut energy use and greenhouse gas emissions, limit water, air and other pollutions and produce less waste. The paper also continues to store carbon throughout its lifetime. Recycling plays an important role in the sustainability of the environment. So unlike other materials, we should try to use renewable substance for paper making. The best contribution that society can make towards responsible paper consumption is by contributing to recycling, by separating used paper from other residues and putting them in the appropriate containers. This paper explores how to use paper more responsibly, reduce the amount of paper that library uses and effectively make service improvement from a cost, communication, and environmental standpoint.

Keywords: Less paper, Ecological damage, Library, Carbon Footprint

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INTRODUCTION

The purpose of the present study was to resolve that the less paper library always remained a myth or using less paper in a library can make it a reality. In order to do this, we discussed the facts that the numbers of using paper are still shocking, steps to reduce the use of paper in the library and effects of using less paper on the environment. During the last 40 years, people began talking about the possibility of a "paperless library". The first prediction of the paperless library was introduced by Frederick Wilfrid Lancaster in 1978. It coincided with the advent of the personal computer, and the hope was that all documents could be processed electronically and that paper would become irrelevant. Since then, a number of technologies have prepared it appear within our grab—major among them desktop publishing, the web, XML, content management systems, e-mail, e-learning, electronic books, and many more. Nowadays, digital information available around the world and into, through and out of the libraries is managed and secured in digital repositories and spread information at high-speed [1a]. The reality is paper consumption is still increasing, elevated to extremely high levels. Paper continues to predominate in most of the activities that involve information work, knowledge work, reading and collaboration. This growth will continue because paper is in appearance of everyday living. For example, we read newspaper daily. But do you know that it takes approximately seventy-five thousand trees to make the newsprint for the average Sunday edition of The New York Times. Paper has become a display medium for human collaboration. We need paper in our daily life as we read newspapers, magazines and books still in print form. The range of possible uses of paper seems almost limitless. New ways of using paper are being devised daily. Paper is becoming a more impermanent

medium as people print, use and discards document rather than keeping everything they print. Americans discard 4 million tons of office paper every year - enough to build a 12-foot high wall of paper from New York to California [2a]. We are not headed towards libraries that use less paper but quite towards libraries that keep less paper. The use of paper in library is one of the major factors contributing to environmental changes. The felling of trees in the primary position directly contributes to carbon emissions as a result of technology used in the process and in shipping both. Further to this the felling of trees, which naturally store carbon, means that yet more carbon will stay in the atmosphere, contributing to climate change again. Once paper is made (involving manufacturing processes that consume carbon) it must then be elated, which inevitably will involve the burning of even more carbon fuel. This mount effect makes saving and recycling paper vital if we are to undertake climate change. So, in spite of all of the advances and all of the talk and promises, we are still using a lot of paper, and the vision of a paperless library is looking more and more like an illusion.

ABOUT PAPER

The good news about paper is that growth in the use of paper appears to be under control at a relatively flat 3% per year, actually declining in some regions already. The bad news is that paper use is still growing while it should be declining. The consequences for libraries are still serious:

- **Paper is costly:** It represents a significant cost for library printing and office printing (more than 20 percent of the total cost). It adds up rapidly when we regard as that document-related activities consume up to 15 percent of a library's annual revenue. Every year in the United States, over 2 billion books are published, 359 million magazines are published 24 billion newspapers are published [2b].
- **Paper is an information management dreadful:** When information exists only on paper, it is extremely difficult to accumulate, handle and share. Those storerooms with intricate rows of filing cabinets are exhausted on time and productivity as people go on daily quests

for missing information. Those warehouses full of printed material to represent the oldest and inactive form of information, slowly decaying to a predictable providence of unexpected obsolescence. It is estimated that 30 to 40 percent of offset-printed materials go to waste. And what about all of the ideas, notes, information and knowledge captured on paper and never shared? That's a caricature for any institution.

- **Paper represents a security risk:** There are other impacts as well. Regulatory compliance issues require library to keep accurate records, provide thorough documentation for a number of library operations, and handle personally particular information suitably. Information on paper tends to be easily lost or simply left deceitful around where people, who shouldn't have access to it. Security issues have to be part of the communication as well. Information on paper is harder to keep track of.
- **Paper is a restricted resource:** A single sheet of paper may contain fibers from hundreds of trees from around the world. Trees are more than just beautiful to look at; they are a vital part of our ecosystem. Every tree provides oxygen enough for three people to breathe. We have to be meticulous and produce paper in ways that are sustainable [1b].

FACTS ABOUT PAPER USAGE

Currently desktop publishing use to produce digital documents by the billions each year, but still print them in astonishing numbers. It is estimated that in four years, i.e., from 2007 to 2010, more than 10 trillion pages was printed in libraries in the U.S. alone and paper consumption will rise by 50% by 2015. The average daily web user prints 28 pages daily [2c]. Librarians are acutely aware of the impact the information explosion has had on the amount of paper flowing in and out of libraries. The previously touted paperless society has not happened [3]. Two out of every five pages in the library are for "daily" use, like circulation, accessioning, e-mails, Web pages and reference materials that have been printed for a single viewing. Unfortunately, printed pages use inks and toners that last

indefinitely and require the paper to be recycled in order to be reused. Combine this with deforestation, waste and emissions from landfill and we find that the paper industry contributes around 10% of global carbon emissions – that's about three time's global aviation emissions. So, paper mechanized requires huge inputs of chemicals, energy and water. Plantations use grave doses of insecticides, fungicides and herbicides, which do not provide the same ecosystem as natural forests and frequently displace indigenous peoples and displace natural ecosystem functions including forests. These ecological challenges are particularly significant because library staff must regard as they in their own day-to-day printing habits, in addition to encouraging ecologically careful printing in the user inhabitants. Using "Less Paper" and substitutes alternative papers can greatly minimize these environmental impacts (Table 1).

Table 1: List of Apparent Consumption of Paper.

	Production	Exports	Imports[1]	Consumption[2]
Newsprint	**415**	**0**	**325**	**739**
Printing and Writing	**587**	**108**	**1140**	**1,619**
Tissue	**200**	**0**	**88**	**288**
Packaging and Industrial	**1,916**	**496**	**191**	**1,610**
Total	**3,110**	**605**	**1,743**	**4,257**

1 Source: Australian Bureau of Agricultural and Resource Economics (ABARE)
2 Consumption = Production - Exports + Imports

STEPS OF USING LESS PAPER IN LIBRARY FOR REDUCTION OF ECOLOGICAL DAMAGE AND CARBON FOOT PRINT

There are many simple ways for libraries to reduce their paper use and costs. Reductions of 20 percent or more are possible in most libraries. Using less paper saves money, and also helps in less storage, less filling, less shredding, less recycling and less waste disposal and less carbon footprint. Carbon footprint is a term commonly used to describe the total amount of carbon dioxide and other greenhouse gas emissions [4]. Carbon dioxide has taken a centre stage in the environmental arena. It was in the 19th century, scientists realized that gases in the atmosphere cause a "greenhouse effect" which affects the planet's temperature. The carbon footprint is a measure of the exclusive total amount of carbon dioxide emissions that is directly and indirectly caused by an activity or is accumulated over the life stages of a product [5]. So, by eliminating needless uses of paper and getting more out of the paper that is used, your work will keep resources every step of the way. There are a number of essential and simple strategies for using less paper, significantly less.

Considering before Printing or Copying the Paper

- ❖ There is really a need to print all the paper.
- ❖ Used both sides of the paper if it is possible.
- ❖ Use word processor's spell check and on-screen print preview characteristic like check spelling, layout, and page breaks before printing.
- ❖ Use the plain sides of previously used paper for printing.

Sharing the Documents Electronically Instead of Print Form

- ❖ In place of printing documents, keep electronic files that staff of library can easily access.
- ❖ Evaluate and correct the documents on-screen rather than on paper.
- ❖ Convince users of library to send their mail or feedback electronically.
- ❖ Transform printed forms to electronic format such as digitization of manuscripts or rare books.
- ❖ Make use of formats such as searchable PDF and include metadata to make the information easier to find and it is more useful to a larger number of people.
- ❖ Make use of scanning solutions to do everyday tasks.

Avoiding Printing Unnecessary E-mails
- ❖ Avoid printing e-mail messages if it is not necessary.
- ❖ For efficient retrieval, systematize and save e-mails in an electronic folder system and to guide the staff to use standardized e-filing system.
- ❖ If it is important to print a web page, look for a "printer-friendly" option that will reduce paper use.

Printing more Words on Each Page
- ❖ By using smaller fonts in large documents the library can reduce page numbers.
- ❖ For making notes or any report for the library the staff may use small size of paper like A5 rather than A4.
- ❖ Use thinner page margins and less line spacing to make the most use of the amount of space for text.

Saving and Reuse Paper around the Library
- ❖ The staff can place labels over the old addresses and envelops and reuse them.
- ❖ Compress and store large boxes until they are needed again.
- ❖ Collect and reuse one side of used paper by turning them into notepads.

Testing before Copying Maximum Documents
- ❖ Testing before copying or make a print out of multiple documents can check from doing costly mistakes.
- ❖ Run a sample copy before you run off multiple copies, if the machine does not have a sample button.

Keeping a Backup File
- ❖ Arrange a "set and forget" daily backup system for library files and e-mails that if the computer crashes files are not lost.
- ❖ Set up a system that automatically backup file.

EFFECTS OF LESS PAPER USE IN LIBRARY ON 3 E'S, i.e., ECONOMICAL, ENVIRONMENTAL AND EFFICIENT

Economical: Saving Paper Saves Money
Each page of paper used in a library increases not only purchasing costs, but also storage, copying, printing, postage, disposal, and recycling. So whatever total amount of paper used in the library, reduce it to save money for any other work. Using fewer papers not only saves money, it can also diminish inefficiencies that excessive paper use may create in the library.

Environmental: Saving Paper Reduces Our Impact
Paper is a library necessity for every essential task, but it has an environmental cost also. Creating paper requires a lot of natural wealth, i.e., trees, water, and energy. The entire process of paper creating uses tens of millions of trees per year and generates millions of tons of greenhouse gases. So, to reduce our impacts on the environment remember these three points:
- • Reduce use of paper
- • Reuse the paper used
- • Recycle the paper

Recycling paper vastly reduces paper waste. Perhaps recycling on a small scale successfully could help make an impact on the nation as a whole, boosting up the percentage of recycled paper. Improving the recycling practices in the library and promoting more recycling could drastically improve the library's impact on the environment [6].

Efficient: Saving Paper Increases Efficiency
Paperwork brings out unnecessarily complicated forms but now, electronic forms can make our work easier and more efficient because it takes less time to both find and process information. This does not mean that electronic forms should replace all paper work. In some instances, the paper will be the best means, but most of the time it finds that reducing their paper use increases their efficiency [7].

The Australian National Audit Office (ANAO) move to electronically store documents and records, the ANAO introduced a Commonwealth–complaint Electronic Document and Records Management System (EDRMS). ANAO employees are now scanning paper files and gathering electronic documents from agencies and placing them as records in its EDRMS.

The key benefits include:

- Employees now carries audit files electronically when they travel.
- Documents can now be shared easily between audit team members when they are on or offsite.
- Information and knowledge sharing has improved.

The current productivity benefit gained by this paper-reduction measure is estimated to be in the order of $1.3 million per year. The reduced paper use, manual handling and storage costs will also provide additional savings to the ANAO [8].

CONCLUSION

Libraries can take steps to reduce the use of paper in daily in-house operations as well as out sourcing works. By setting double-sided as the default printing option in the library printers a lot of paper can be saved. Staff can also show users how to use print preview, print selected pages or highlight text when printing from the internet. Users can develop a habit to used double-sided printing. Librarians should control excessive and unnecessary printing by the staff also and encourage reducing, reusing and recycling the paper. While paper use and recycling are campus-wide concerns and require cooperation among all the divisions, libraries can become a model by allowing our decision-making to be guided by environmental protection principles. Paperless library is not likely to become a certainty in a very long time, if ever, but what can libraries do now to dampen paper waste and encourage recycling.

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