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THE IMPACT OF DESKTOP PUBLISHING ON THE TIME AND COST
REQUIRED TO COMPLETE A PRINTING PUBLICATION

A Thesis Submitted to the Graduate School in Partial
Fulfillment of the Requirement for the
Degree of Master of Science

By

Ademola M. Olokun

PITTSBURG STATE UNIVERSITY
Pittsburg, Kansas
May 1990

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The author wishes to dedicate this study to his lovely daughter Tolutope.

Ademola Olokun

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ABSTRACT

The real capability of Desktop Publishing (DTP) is the ability it gives the user to quickly design an entire document, complete with type and graphics, see it accurately on the screen, proof it on a laser printer, then typeset the entire page ready for printing, the same computer file, at a fraction of the time and cost required before.

This study was carried out to determine the impact of desktop publishing on the printing industry in the state of Kansas. Specifically, it examined the turnaround time and cost desktop publishing had related to traditional pre-press printing methods.

A mailed survey was sent out to fifty industries in Kansas. Data from the questionnaire were compiled and then calculated in percentages. DTP was used by 68 percent of the respondents. Only 47 percent of the respondents claimed to be using it for their pre-presswork. What the rest use DTP it for is yet to be identified.

About 53 percent of the respondents reported that desktop system reduced the time for their pre-presswork, as well as did saving information on the computer disk; while 47 percent claimed it reduced the cost of preparing their pre-presswork, as well as did saving information on the computer disk.

A further study on this new technology is encouraged by the researcher, but this time using printing instructors as the population.

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CHAPTER I

INTRODUCTION

For hundreds of years, printing was done from metal types and metal image masters called cuts. Publication of materials started as far back as 1450 by a German named Gutenberg. Next movable types referred to as Letterpress, a fairly simple method with a low investment was involved. Later Linotype printing was developed where slugs were produced on a specialized machine. Then typesetting a more expensive and complicated device was introduced. Desktop Publishing technology is a new method that has not totally replaced earlier methods, but has reduced their use to specific types of printing jobs. The goal of printing has remained the same. Today, published works are done with computer techniques.

The products of computerized techniques are not judged by how much work they can do, but how much control they give to creators over their work, how easy it is to make revisions, and how fast they execute new ideas. The combination of all these processing is known as Desktop Publishing (DTP), with time and cost savings as it's greatest advantage.

Desktop Publishing has become a very popular application within the past five years, with many new features and the capabilities of preparing complex documents added to it. Nevertheless, the Desktop system is merely a tool, and being able to use the tool does not make an individual a publisher or typesetter. These two are old industries, whose techniques are partly science and partly art. Hence, the intricacies of typesetting must be understood. (Goldstein, 1988)

Desktop Publishing is a mix of tradition and innovation. While the attitude of "new and therefore better" has the potential of creating printed garbage, the attitude of "old and therefore good" can prevent using the full potential of the new technologies available.

Desktop Publishing was first introduced in 1984. It was not until after 1986 that DTP was accepted by the printing industry. Since then printers have been purchasing DTP equipment and programs at an increasing rate. Although the actual printing is still done conventionally, DTP involves all preliminary work that was done traditionally by a layout person. This included cutting and pasting of text and pictures, merging of text and graphics. These tasks consumed a lot of money and time. Many businesses now feel that they can reduce time and cost by switching from the conventional pre-press printing methods to Desktop Publishing.

Statement of the Problem

The problem of this study was to compare the time and cost for completing a publication using a Desktop Publishing system with Conventional in-house publishing techniques.

Related Questions

The questionnaire mailed to selected printing industries in the state of Kansas, addressed the following questions

1. What percentage of printing firms use Desktop Publishing for pre-presswork?
2. What percentage of pre-presswork is done with Desktop Publishing?
3. How much has Desktop Publishing reduced the time required for pre-press work?
4. How much has Desktop Publishing reduced the cost involved in pre-press work?

Significance of the Study

The purpose of this study was to establish the practical perspective that Desktop Publishing provides general-purpose tools that can be applied to many publishing situation, hence reducing a great deal of production time, used in conventional (traditional) method. (Kruse, 1989)

Conventional publishing methods are those requiring the production of a negative for the use on a printing press. They are expensive and requires considerable time. Word processing ,as it was called, helped with the production of text, but visual development of images remained a problem. Today , computers are powerful enough to process images. (Weatherall, 1988) This phenomena had been researched and tested by Tom Gill of Quark incorporations. During his studies, he emphasized that Desktop Publishing allowed users to regain control of original document, eliminated steps, and saved time.(Romeo, 1989)

Despite its importance and convenience, Desktop publishing does not meet everybody's need. Among its benefits are reduced production time, composition costs, lower page layout time and cost, and production flexibility. (Campbell, 1988)

Limitation of the Study

1. This study was limited to printing firms listed in the 1989-90 edition of the Kansas Business Directory; compiled from the Yellow Pages.
2. The study was limited to printing firms with sales volume of between \$1-10 million.
3. The instrument was not pilot tested for reliability.

Basic Assumptions

1. The questionnaire were answered truthfully by the participants.
2. The questionnaire items were valid.
3. The individuals selected were representative of the publishing industries in the state of Kansas.

Definition of Terms

Desktop Publishing - A printing process that encompasses the total control and appearance of a document by incorporating text, graphics, pictures, and different types.

Conventional Publishing - A printing process, whereby a negative is first produced for the use on a printing press.

Laser Printers - A device that is used to produce a printed page using a laser to charge a selenium drum. This drum then prints the pages through the xerographic process which uses toners heat and pressure.

Wysiwyg - A slang term meaning what you see is what you get.

Artwork - A graphic element added to the layout. It can be a drawing, line art or photograph.

Camera Ready - A master ready to be used in the photo offset printing process.

DTP - Desktop Publishing.

Linotype - A line of type cast in one piece, on a machine.

Letterpress - The making of impressions by means of raised characters on type or plate.

Ptg - An abbreviation for printing.

CHAPTER II

REVIEW OF LITERATURE

The new printing technology known as desktop publishing has extended the limits of traditional publishing. Although, desktop publishing is relatively new, it had already made a drastic impact, allowing user's to produce professional high-quality documents. It also has many features that are unique. Not only can it save time, artwork can also be saved, for future modification or enhancement. Departments served by desktop publishing benefits from electronic originals in savings of time, materials and labor, as well as in ease of access and modification. Of these advantages, time and cost savings were considered the single most important (Anonymous, 1988). Initially when desktop publishing was created, the level of service it was intended to offer was an upgrade of current internal documents. It was designed to help improve the look of documents that were typewritten or monospaced word processed. Today, desktop publishing goes much further. Corporations like Linotype Company and its commitment to the desktop publishing market, offer true quality phototypesetting or image setting giving the highest quality type and graphic output available on paper or film (Lukanen, 1988).

"Publishing electronically through the use of computers is not new to the printing industry. Computers have dominated the scene since the advent of phototypesetting equipment in the early 1970s It took some time, however, for this level of acceptability to be reached." (Link, 1989)

Since its inception, desktop publishing had been one of the fastest growing applications of microcomputers. Businesses and established industries discovering the abilities of desktop publishing (DTP) selected it over traditional methods of publishing, saving time, money and human resources (Dzuja, 1989).

Where quality proves adequate, desktop publishing delivers major time saving, in

addition, and often just important, saved cost. With desktop publishing, a company rushing a product to market can create press-ready literature in minutes. After interviewing the product designers, the product manager can produce a rough copy and send the diskette to the editorial department, where it would be turned into a draft and reviewed for approval. Professional-looking transparencies can also be generated in a minimum amount of time (Friedrich, 1988).

Desktop publishing is a fairly new computer application that helped to revolutionize some business tasks in terms of production time and cost. These were achieved since most of the work a company has to typeset, such as forms, price lists, newsletters, direct-mail letters, and advertisements can be prepared with desktop equipment (Lukanen, 1988). For example, prior to desktop publishing, preparing tables of numbers and incorporating them into text was often a frustrating thing. As personal computers became standard equipment in the office, handling numerical information became easier. With desktop technology, much of the agony that typically accompanied the preparation of numerical information had been eliminated. Almost all computer business applications initially justify themselves through the performance of repetitive tasks. DTP presents the same advantages. More significantly time savings were realized when revisions are submitted, with revisions being a normal part of the production cycle (McGoon, 1989).

In effect, desktop system are scaled down versions of full scale computer composition techniques; as well as a mix of tradition and innovation (McGoon, 1989). One of the most popular uses of desktop publishing system is preparing customized presentation materials for salespeople (McIlroy, 1989). Many businesses, face tight competition hence, they must move at a faster rate in order to stay ahead of their competitors. The use of desktop publishing could not only save money, but it also cut the time required to get these important documents into print. For example, business reports that take many forms, previously required one person for drafting, and another person for preparing the report for publication on the overhead transparencies. With a desktop system, only one person is required so time is saved from documents changing

hands. Due to these reasons, thousands of small and mid-size companies are adopting desktop publishing because communication in firms must be as quick and effective as the competition.

Research showed that more attractive and timely marketing materials are generated in less time with lower cost per item, while allowing more direct control production. Brochures, an important tool for marketing, can be obtained using a desktop system to give a professional- looking brochure, where the time and money to spend on typesetting is not available.

" Since the advent of desktop publishing systems, printers have tended to be very skeptical of the new technology. As in all vocations, when a craft is threatened by extinction because of a "new way to do things," it is rejected strongly." (Link, 1989). Reasons for this varied, but to printers, traditional methods are time consuming and many existing processes are very costly.

The conventional methods, are those regarded as requiring the production of a negative for the use on printing presses. They are expensive and requires very long time for completion (Lewis, 1989).

While the reasons for switching to desktop publishing have been many, the most considered important factor was, it's ability in-relation to time for completion, because desktop systems produced job quickly and inexpensively (Landus, 1988).

Steelcases, Inc. of Grand Rapids, Michigan, had over 10,000 employees, and created all it's advertisements by hand, using typewriters, press types and stock logs. Steelcases evaluated it's work load and then bought two desktop systems. Before the purchase, the company required 167 hours within a week to produce 197 forms, but with the DTP system in place, it took the company 144 hours to produce 198 forms. A technical writer with a desktop system eliminated many of the steps prior to sending the document to the printer.

A relatively new company in Dallas, Texas, *American Portable Publishing*, hired salespeople who were top ranking recent college graduates. It trained them on desktop publishing systems to meet its targeted business markets. Then salespeople called on accounts with portable desktop publishing systems, including a printer. Layout was done in the buyers office. By the time the representative concluded the visit, the

customer would see a layout, output in final form, know the price and contract for printed newsletters, forms, sell sheets, etc. The creation of the printed matter was done on the premises, and in the presence of the buyer, within a short period of time (Gorelick, 1989).

Another company, *Seattle Lithography*, caught in the squeeze between traditional and quick printing competition, turned to desktop publishing in 1985.

"The newspaper industry is another area in the printing industry whose response to desktop publishing has been overwhelming. All across the country newspapers are converting from traditional typesetting equipment to desktop systems because of the graphic capabilities as well as image assembly. Magazines, too, are using desktop publishing systems to allow for breaking stories and a reduction in production time Jeff Nichols, publisher for *The Citizen*, indicated the desktop systems has saved the company time and money particularly in ad layout and pasteup" (Link, 1989).

Within its short existence in the publishing industries and businesses, desktop publishing became widely accepted as companies saved time and cost on producing their own publications through this system (Gorelick, 1989).

One stated goal of an organization considering desktop publishing was to reduce time or eliminate dependence on outside services, where work was placed along with other customers. Because it was believed that if production depend on external sources, then the schedule must always reflect their external time constraints (McGoon, 1989).

In an article in the January issue of *Office Magazine*, desktop publishing was compared to conventional in-house publishing. In this article, it was emphasized that turnaround time was reduced from weeks to days, and that the ability to make quick last minute changes was part of the appeal Desktop system had. With this new technology, Reiber, said it was possible for the same person to be the author, editor, artist, printer, and publisher (McIlroy, 1989).

Many companies had discovered that this ability to produce better-looking documents enhanced written communication which in turn enhanced their image. Studies have shown that it was easier to read and understand an attractive document illustrated with graphs. Before desktop publishing, this type of production involves

more than one person, which might take more than ten days. With today's technology, however, one person can produce a document on a microcomputer in a matter of hours (McShane, 1986).

The laser printer came into being to produce documents that did not need to be commercially printed. Before the invent of DTP, it was possible to prepare a camera-ready project from typewriter to print shop, but the finished product did not present a professional image of the company it represented. In addition to producing documents of near-type quality and saving time and expense, desktop users gain control over the finished product with a laser printer (McShane,1986).

Desktop publishing helped Governor John R. McKernam Jr. of Maine to keep his platform promise to give voters more and better information on the status of their public schools. He committed himself on the issue of report cards giving out promptly to voters' children, but his vision lacked strategy on achieving it not realizing that there were serious technical barriers to overcome.

Hence, the task of developing a report card for each of the nearly 300 school administrative units fell on the the Commissioner of education, who in turn created a task force who met monthly for most of the school year. Desktop publishing technology allowed him to keep to his platform promises on the issuance of report cards (Reiber, 1987).

CHAPTER III

PROCEDURES

The review of literature indicated that DTP has begun to extend the limits of traditional publishing, in terms of saving time, cost and artwork. It was believed that within its short existence in the industries and businesses, Desktop Publishing, had become widely accepted.

These revelations aroused the researcher's interest in determining the impact if any of DTP on the time and cost required to complete a printing publication.

Procedures for Collecting Data

The names and mailing addresses of 256 printing firms with sales volume of between \$1-10 million in the state of Kansas, were obtained from the Kansas business Directory 1989-90 edition. A representative sample of fifty firms were selected from this list by choosing every fifth firm. A questionnaire was developed based on the review of literature and distributed by first class mail.

Initially, forty four percent of the subjects returned the questionnaire. Those not responding were contacted with a follow up letter. After the follow-up letter was sent, fifty-two percent return was finally achieved.

Procedure for Treating Data

At the end of the study, the researcher used descriptive analysis to determine if there was a reduction in time and cost by using DTP for a printing publication. Percentages were used to represent the distribution, so as to simplify the data and then translate the responses in a standard form for relative comparison.

CHAPTER IV

RESULTS OF SURVEY

A survey questionnaire was mailed to fifty printing industries in the state of Kansas. Each printing industry was requested to route the questionnaire to the person most qualified in the Desktop Publishing field for completion and to return it by March 23, 1990.

Of the fifty questionnaire sent out, twenty-two were returned giving a forty-four percent return rate. A follow-up letter was sent to those not responding. After the follow-up, an additional four surveys were received making a total of twenty-six, which represented a fifty-two percent.

The survey questionnaire dealt with these areas which would indicate the impact, if any, of desktop publishing in the printing industry. These were:

- a. The number that uses DTP for their pre-presswork.
- b. The percentage of pre - presswork done with DTP.
- c. How much DTP reduced the pre - presswork time.
- d. How much DTP reduced the cost of pre - presswork.

The responses to the survey were individually received and each answer was included in a cumulative tally based on the number of responses. Data were analyzed and reported as percentages. For example, if fourteen out of out of twenty- six responses indicated a Yes, while twelve indicated a No, the percents were calculated as;

$$\text{Yes} - 14/26 \times 100 = 54\%$$

$$\text{No} - 12/26 \times 100 = 46\%$$

The first question was asked to determine the size of the company as related to the number of people employed. Table 1 gives data related to the number of employees.

TABLE I

SIZE OF COMPANY

Full Time Employees	Number Reporting	% of Responses
Less than 20	9	35
21 - 40	6	23
41 - 60	1	4
61 and above	10	38

Information in Table I shows that 35 percent of the printing businesses in this survey employed less than 20 people. Twenty-three percent representing 6 companies employed between 21 - 40. Only 4 percent representing 1 company employed between 41 - 60, while 38 percent employed more than 61.

Question 2 asked how many of these employees were hired with a basic entry skill in printing. Table II depicts the number of employees hired with a basic entry skill in printing.

TABLE II

NUMBER EMPLOYED WITH A BASIC ENTRY SKILL IN PRINTING

Employee With Basic Entry Skill in Printing	Number Reporting	% of Response
Less than 20 employed with basic entry skill in Ptg.	20	76
21 - 40 employed with basic entry skill in Ptg.	3	12
41 - 60 employed with basic entry skill in Ptg.	0	0
61 and above employed with basic entry skill in Ptg.	3	12

Data in Table II show that 76 percent of the respondents employed less than 20 employees with a basic entry skill in printing. Twelve percent hired 21 - 40 with basic entry skill in printing. Out of the 10 companies that employed 61 or more employees, only 3 companies hired at least 61 or more employees with a basic entry skill in printing.

Question 3 in the survey was used to determine the percentage of printing industries in the sample that used DTP in their business. Eighteen printing companies representing 69 percent used DTP, while only 8, representing thirty-one percent, did not.

The researcher attempted to find out with question 4 how many new employees had basic entry skills in DTP. All the respondents hired fewer than 20 employees with a basic entry skill in DTP.

Question 5 was used to determine the number of employees trained in DTP. Two out of the 10 firms which employed 61 or more trained at least 61 employees in DTP. The rest trained no more than 20 employees in DTP.

TABLE III

EMPLOYEES TRAINED IN DTP

Number Trained in DTP	Responses	% of Response
Less than 20	17	89
21 - 40	0	0
41 - 60	0	0
61 and above	2	11

After considering DTP training, the researcher went further to determine the percentage of pre-press work done with DTP.

TABLE IV

PRE-PRESSWORK PRODUCED WITH DTP

Percentage of Pre-press Work	Number Reporting	% of Responses
Less than 20%	8	42
21 - 40%	1	5
41 -60%	1	5
61% and above	9	47

Information in Table IV shows that, approximately 47 percent of the respondents claimed that 61 percent or more of their pre-presswork is done with DTP. Five percent

claimed between 21 and 60 percent, while 42 percent claimed that less than 20 percent of their pre-presswork is done on DTP.

Question 7 was asked to find out the percentages of camera ready jobs which were produced in-house, sent out or received ready from customers.

TABLE V

CAMERA READY JOB PRODUCTION

Percentages of Camera Ready Jobs	Produced In-house		Sent out customers		Received from	
None	2	11%	10	53%	0	0%
Less than 20%	1	5%	8	42%	7	37%
21 - 40%	2	11%	1	5%	10	53%
41 - 60%	1	5%	0	0%	2	11%
61% and above	13	68%	0	0%	0	0%

The data in Table V indicate that 68 percent of the respondents produced 61 percent or more of their camera ready work in-house, 53 percent sent nothing out of their organization, to be put in camera ready form. Ten printing companies claimed they received between 21-40 percent of their camera ready jobs from their customers.

The main aim of the study which was to compare the time and cost needed to complete a publication using a Desktop Publishing system with traditional method could be accomplished from responses to questions 8 and 9.

TABLE VI

TIME AND COST REDUCTION BY DTP

Percentages of Time & Cost Reduced	Number Reporting	% of time Reduced	Number Reporting	% of cost Reduced
No effect	3	16	4	21
Less than 20%	9	47	7	37
21 - 40%	2	11	4	21
41 - 60%	1	5	4	21
61% and above	4	21	0	0

As reflected in Table VI, 16 percent of the respondents claimed DTP had no effect on the time used for pre-press work. Forty-seven percent of the respondents claimed the time used in preparing pre-press work was reduced by less than 20%. Approximately 37 percent claimed the time spent on pre-presswork was reduced by 21% or more.

Thirty-seven percent of the respondents claimed material cost was reduced less than 20% by using DTP for their pre-presswork.

Twenty-one percent claimed DTP had no effect on material cost, while 42 percent claimed between 21% or more of their material cost is saved.

TABLE VII

TIME AND COST REDUCED BY SAVING INFORMATION ON THE COMPUTER DISK

Percentages of Time & Cost Reduced	Number Reporting	% of time Reduced	Number Reporting	% of cost Reduced
None	2	11	3	16
Less than 20%	11	58	11	58
21 - 40%	0	0	1	5
41 - 60%	1	5	2	10.5
61 and above	5	26	2	10.5

The effect of DTP in reducing pre-presswork time and cost through saving information on the computer disk seemed to be uniform. Fifty-eight percent of the respondents felt that less than 20% of their time and cost were reduced through saving information on the computer disk. Two companies reported that DTP had not saved time. Three companies reported it had not reduced cost by saving information on a computer disk. Six companies claimed DTP saved more than 41 percent of their time, while 5 companies claimed it saved more than 21 percent of their cost by saving information on a computer disk.

The researcher went further to determine what kind of typesetting equipment was generally being used in businesses in the survey.

TABLE VIII

TYPESETTING EQUIPMENT USED

Typesetting Equipment Used	Number Reporting	% of Responses
Hot Metal	4	21
Phototypesetting	10	53
IBM	7	37
Macintosh	7	37
Others	2	11

The data in Table VIII, shows that 53 percent of the respondents used Phototypesetting 21 percent use Hot metals, while approximately 85 percent of the respondents used what can be classified as DTP equipment for their typesetting. Several respondents used more than one kind of typesetting equipment.

TABLE IX

THOSE CONSIDERING THE PURCHASE OF DTP EQUIPMENT

Those Considering the Purchase	Number Reporting	% of Responses
Yes	2	25
No	6	75

Question 13 was asked to find out how many of the eight respondents not now using DTP were considering the purchase of DTP equipment. Seventy-five percent of these

respondents surveyed claimed they were not considering the purchase of a DTP equipment, due to lack of training or other reasons not given. While 25 percent were considering the purchase.

TABLE X

REASONS FOR OR AGAINST THE PURCHASE

For	Number Reporting	% of Responses	Against	Number Reporting	% of Responses
Saves time	2	100	Lack of training	1	11
saves material	0	0	Cost of equip.	0	0
Saves labor	0	0	Time consumed	0	0
Others	0	0	Others	6	89

As shown in Table X, regarding the two companies in Table IX considering the purchase of DTP equipment, both respondents said so because it saved time. Six respondents claimed they were not considering the purchase because of other reasons, and one of these respondent claimed it was because of a lack of training. Several repondents had more than one reason for the purchase of a DTP equipment.

Selected Comments

One of the respondents claimed that "DTP does saves a great deal of time." The main concern was that most of the output received from customers was done on low quality printers.

Another respondent said that after embracing the new technology two years ago, he now uses his compugraphic phototypesetter very rarely. While one claimed, since installing the DTP equipment, his publication time has been reduced greatly.

A third respondent claimed they just installed a DTP equipment less than 2 years ago. Therefore, it was too early to determine the impact if any on savings at this time.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to briefly summarize and conclude the results of this study. DTP was compared to traditional methods of printing in relation to time and cost.

Thirty - eight percent of the respondents employed 61 or more full time employees, while 35 percent hired less than 20 full time employees. It would be difficult to say categorically that companies with a sales volume of between \$1 and 10 million employed a large or small number of employees . Over 70 percent of the sample, at the present time, employed less than 20 employees with at least a basic entry skill in printing; while 12 percent only employed between 61 and above. It came as a surprise to the researcher as only 2 out of the 10 companies with sales volume of between \$1 and 10 that employed over 60 or more full time employees trained their employees in this new technology. Out of these 3 only 2 trained their personnel. Respondents were also asked the percentage of pre-presswork done with DTP. Forty-seven percent of the respondents claimed 61 percent or more of their pre-presswork was done with DTP. This the researcher felt fell in the medium size industries considered in terms of sales volume.

Half of the respondents did not send work out of their organization. At the same time, more than half reported receiving from 21 to 40 percent of work from their customers in camera ready form. Sixty eight percent of the respondents claimed 61 percent or more of their camera ready work was done in-house. This indicated that most industries preferred to start and finish a publication within their organization.

Sixty-nine percent of the respondents claimed they used DTP. Out of this number approximately 85 percent of the respondents surveyed were using equipment classified as DTP equipment. Fifty-three percent used phototypesetting equipment. Four companies were still using hot metal for pre- press work.

Out of the 75 percent not considering the purchase of DTP equipment, 6 of the respondents had other reasons not given. One of these claimed it was because of a lack of training. Two were considering the purchase of DTP equipment, because, of it's ability to save time, labor and material.

Only 47 percent of the respondent surveyed claimed DTP saved less than 20 percent of their time, while 37 percent reported it saved less than 20 percent of their cost. This is due to some of the respondents claiming it is still a new technology. Therefore, it was too early to determine the impact on savings at this time.

With the present trend, approximately 53 percent considered that DTP saved time used for pre-presswork and on information on the computer disks. It is the writers opinion that there will be an increase in the use of DTP in the next 3 to 5 years.

CHAPTER VI

RECOMMENDATIONS

Although, it's turnaround time and cost is still very low, the researcher could predict an increase in the use of DTP equipment, in the nearest future.

The researcher recommends the use DTP as all the respondents surveyed in the sample believed that DTP system saved considerable time for in-house pre-presswork.

A lack of training was given as one reason for not using DTP. The researcher recommends more staff in-service and college training programs on Desktop Publishing.

Output quality is another reason given for not considering the purchase of a DTP equipment. The researcher recommends a study to determine the output quality obtained using DTP equipment.

The researcher recommends further study to determine the impact of Desktop Publishing using another population such as printing instructors.

APPENDIX A

March 3, 1990

DESKTOP PUBLISHING SURVEY

Attached to this letter, is a questionnaire to gather information on the impact, if any, of Desktop Publishing in the printing industry compared with the traditional prepress method in relation to the time and cost required to complete a publication.

In this study Desktop publishing is considered as the term applied to the design and production of items to be printed whether they are brochures, office forms, newsletters, price sheets or annual reports. The actual printing is done conventionally, using offset or other printing methods. This form of publishing is rapidly growing in application in the industry.

I would appreciate your help in completing the enclosed questionnaire. Please route it to the person you feel would be most knowledgeable in this area.

I am aware of the time it takes to fill out surveys. This one should take you less than twenty minutes. Hopefully, you will find the survey interesting and not too time consuming. A copy of my results will be sent to you if requested. Please return the survey by March 23rd.

Sincerely,

Ademola Morakinyo Olokun
P.S.U. Graduate Student

Robert Schwindt, Ed. D.
Assistant Professor
Technical Education Dept.
P. S. U.

APPENDIX B

26th March, 1990

Dear Sir

Enclosed is a questionnaire that was sent to printing industries in Kansas to determine the impact of DTP if any, in completing a printing publication. Since you are one of the industries that have not replied, I feel the questionnaire may not have reached you or may have been misplaced.

A reply by one who is knowledgeable in this area will be of great importance in helping to further this study.

A self-addressed envelope is enclosed for your convenience.

Yours very truly,

Ademola M. Olokun.

APPENDIX C

DESKTOP PUBLISHING QUESTIONNAIRE

This instrument is being used to obtain data about the impact Desktop publishing has or will have on the printing industry compared to traditional methods of producing prepress work.

Please circle or check the appropriate responses which apply in your situation.

In this study, DTP is considered as the term applied to the design and pre-press production of items to be printed using a microcomputer.

1. How many full time employees do you have?
 - a. Less than 20
 - b. 21-40
 - c. 41-60
 - d. 61 and above
2. How many were employed with at least a basic entry skill in printing?
 - a. Less than 20
 - b. 21-40
 - c. 41-60
 - d. 61 and above
3. Do you use DTP for pre-presswork in your business?
____ yes, please continue with question No.4
____ no, please continue with question No.13
4. How many were employed with at least a basic entry skill in DTP?
 - a. Less than 20
 - b. 21-40
 - c. 41-60
 - d. 61 and above
5. How many were employed without basic skill in DTP and trained in this method?
 - a. Less than 20
 - b. 21-40
 - c. 41-60
 - d. 61 and above
6. What percentage of your pre-presswork is done with DTP?
 - a. Less than 20%
 - b. 21-40%
 - c. 41-60%
 - d. 61% and above

7. What percentages of camera ready jobs in your business are:
- i. produced in-house?
 - a. None
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
 - ii. are sent out?
 - a. None
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
 - iii. are recieved camera ready from customers?
 - a. None
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
8. How much has DTP reduced the time for prepress work in your business?
- a. No effect
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
9. How much has DTP reduced the material cost for prepress work in your business?
- a. No effect
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
10. How much has DTP reduced your pre-press time by saving information on the computer disk?
- a. None
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above

11. How much has DTP reduced the cost of your pre-press works by saving information on the computer disk?
- a. None
 - b. Less than 20%
 - c. 21-40%
 - d. 41-60%
 - e. 61% and above
12. What kind of typesetting equipment is generally used in your company?
- a. Hot Metal
 - b. Phototypesetting
 - c. IBM or Compatible
 - d. Macintosh
 - e. Others
-

Please continue with No. 16

13. Are you considering the purchase of DTP equipment for prepress work?
- _____ yes,
_____ no, (Thank you for your help, please go to No. 15)

14. If so, why would you purchase this equipment?
- a. saves time
 - b. saves material
 - c. saves labor
 - d. other reasons
-
-

15. If no, is it due to:
- a. lack of training
 - b. cost of DTP equipment
 - c. time consumed
 - d. other reasons
-
-

16. Do you want to receive a copy of this study?
- yes _____ no _____

If yes, please give your name and address below.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

17. Other Comments

APPENDIX D

COMPANIES IN SURVEY

Adams Business Forms
200 SW Jackson
Topeka, KS 66603
913 233-4101

Forms Management Co.
1330 E. 1st
Wichita, KS 67214
316 267-4315

Service Business Forms
815 E. 2nd
Wichita, KS 67202
316 264-4315

Wichita Press & Lithography
4401 Irving
Wichita, KS 67209
316 945-5651

NCR Corporation
1045 New Jersey
Lawrence, KS 66044
913 843-6055

High Plains Publishers
1500 E. Wyatt Earp Blvd
Dodge City, KS 67801
316 227-7171

Wilson-Davis Publication
416 Broadway
Valley Falls, KS 66088
913 945-2606

Quick Print Inc.
301 N. Main
Wichita, KS 67202
316 265-8651

Today Printing
410 W. 21st
Wichita, KS 67203
316 838-9511

Miltz Business Forms Inc.
1004 Weaver
Emporia, KS 66801
316 342-4992

Speciality Projects Corp.
132 E. Maple
Columbus, KS 66762
316 429-1086

Printgraphic
1010 Commercial
Emporia, KS 66801
316 342-0250

Kansas Bank Note Co. Inc.
301 N. 5th
Fredonia, KS 66736
316 378-2146

Arrowhead Printing Inc.
7606 State Avenue
Kansas City, KS 66112
913 334-5371

Brennan Printing Company
613 N. 6th
Kansas city, KS 66101
913 342-6565

E. R. Callender Printing
740 Nebraska
Kansas City, KS 66101
913 371-0330

Lieb-Graphics Corp
1129 Scott Ave.
Kansas City, KS 66105
913 342-9675

Quality Litho Inc.
4627 Mission Rd.
Kansas City, KS 66103
914 262-5341

ACS Direct Mail Services
15 E. Avenue 3
Hutchison, KS 67501
316 665-0440

B & C Inc.
2820 U Roe Lane
Kansas City, KS 66103
913 236-9600

Constable Hodgins Ptg
550 Stanley
Kansas City, KS 66115
913 321-5900

International Printing
720 Kindelberger Rd.
Kansas City, KS 66115
913 321-8172

Paris Printing Co
1235 Southwest Blvd
Kansas City, KS 66103
913 667-6666

Sprangler Printers
2940 S. 44th st
Kansas City, KS 66106
913 722-4500

Tabco Inc.
1323 S. 59th
Kansas City, KS 66106
913 287-3333

House of Usher
838 Massachusetts
Lawrence, KS 66044
913 842-3610

Copies Plus
15145 S. Keeler
Olathe, KS 66062
913 782-7282

Ottawa Herald Inc.
104 S. Cedar
Ottawa, KS 66067
913 242-4700

Flesh Co.
3000 Moran Dr.
Parsons, KS 67357
316 421-6120

Camera-Graphics Inc.
5830 Merriam
Shawnee Mission, KS 66203
913 236-9604

Allen Press
1041 New Hampshire
Lawrence, KS 66044
913 843-1234

American Printing Inc.
1118 Spruce
Leavenworth, KS 66048
913 682-1342

Olathe Printing Service
1601 E. Park
Olathe, KS 66061
913 782-8890

I.M.I. Business Forms
3000 Moran Dr.
Parsons, KS 67357
316 421-1810

Pittcraft Printing Inc.
104 N. Locust
Pittsburg, Ks 66762
316 231-6200

Express Cards & Label Co.
2012 NE Meriden Rd.
Topeka, KS 66608
913 233-0369

ACME Lithographers
310 Pattie
Wichita, KS 67211
316 265-7225

Wallance Computer Svcs.
7800 W 110th
Shawnee Mission, KS 66210
913 451-0151

Dodge City Equip.
606 2nd Ave.
Dodge City, KS 67801
316 227-3106

Clawson Printing Co.
107 W 2nd
Frankfort, KS 66427
913 292-4222

City Blue Print Inc.
1200 E. Waterman
Wichita, KS 67211
316 265-6224

Horner Business Forms
440 N. St. Francis
Wichita, KS 67202
316 262-5151

Chester Press Inc.
310 Commerical
Emporia, KS 66801
316 342-8792

LA Dow & Spohn-Bank
433 Madison
Fredonia, KS 66736
316 378-2541

BIBLIOGRAPHY

BIBLIOGRAPHY

- Andres, C. "A Promise Fulfilled," ITC Desktop, Vol. 1, No. 5 December, 1989.
- Anonymous, "How you can Cut Costs with Desktop Publishing," Profit-Building Strategies For Business Owners, Vol. xviii, February, 1988.
- Campbell, V. "Making the DTP Decision," Association Management, July, 1988.
- Dzujna, C. "Is Desktop Publishing Worth What it Costs?," The Office, Vol. ix, November, 1989.
- Friedrich, E. "Color Benefits Are Driving A Rapid Technology Evolution," Computer Technology Review, Vol. xiii, Summer, 1988.
- Goldstein, M. "Desktop Publishing (Part1), National Productivity Review, Vol. xix Spring, 1988.
- Gorelick, D. "The Desktop Phenomenon", Graphic Art Monthly, Vol. xix, February, 1989.
- Kruse, B. Desktop Publishing, Delmar Inc. New York, 1989.
- Landis, D. "Printing Turn Foe into a Friend," Printing Impression, Vol. xxxvi, November, 1988.
- Lewis, G. "Making a Case for Desktop Publishing," PC Publishing, Vol. iv, January, 1989.
- Link, D. A. Feasibility Study For a Desktop Lab. For Education or Industry at Pittsburg State University, May, 1989.
- Lukanen, P. "Where Does the Future of Electronic Publishing Lies," Office, Vol.108, November, 1988.
- McGoon, C. "Don't Worry, Be Happy," Communication World, Vol. iv, March, 1989.
- McIlroy, T. "DTP Advances to Prominent Industry Position," Printing Impression, Vol.xvi, January, 1989.

McShane, P. "Desktop Lasers Are Dynamos," Computer Decision, Vol. xviii, September, 1986.

Reiber, L. "Which Will it Be," Printing Journal, Vol. ix, February, 1987.

Romeo, L. "DTP: What's the Outlook?" Modern Office Technology, March, 1989.

Weatherall, David, "Desk Top Publishing" Management Services, Vol.xxxii, (Nov.1988), pp.24-26.