

A COMPARISON OF THE PRODUCTION COSTS
OF COLLEGE NEWSPAPERS

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PREFACE

"Getting a doctorate is not an easy task, and you are going to have to face up to what a lot of folks ahead of you have had to do."

This advice was given to the author with sincerity and kindness with the hope that it would serve as a focal point for the completion of this study. It became more than advice. It was the constant challenge, a haunting statement that for days and weeks and months and years seemed to echo again and again.

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Finally, special gratitude is expressed to my parents and to my wife and daughter for their understanding, encouragement and many sacrifices. This dissertation is dedicated to them.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.	1
Statement of the Problem	3
Statement of the Purpose	3
Limitations of the Study	4
Definition of Terms.	4
II. REVIEW OF THE LITERATURE.	8
Cost: The General Situation	8
A PIA Pricing Study	8
Reports From Trade Publications	11
Earlier Academic Research.	17
The 1960 NCCPA Study.	18
The Butler Study.	18
The Tenney Study on Equipment	19
The Sublette Study on Equipment	20
The Steng Study	21
Data From the WAUPM Report	21
The Hughes Profit-Cost Analysis.	26
III. METHODOLOGY	32
The Subjects	33
The Survey Instrument.	33
Survey Procedures.	34
Hypotheses	35
Variables.	35
Analysis of Data	36
IV. ANALYSIS OF THE DATA.	38
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.	61
Summary.	62
Conclusions.	63
Recommendations.	65
SELECTED BIBLIOGRAPHY	68
APPENDIXES.	70

Chapter	Page
APPENDIX A - DATA ON PHOTOTYPESETTING MACHINE PROPOSED TO <u>DAILY O'COLLEGIAN</u> PUBLISHING BOARD	71
APPENDIX B - PROPOSAL TO THE UNIVERSITY OF ILLINOIS BOARD OF STUDENT PUBLICATIONS	73
APPENDIX C - WESTERN ASSOCIATION OF UNIVERSITY PUBLICATIONS MANAGERS 1977 DATA PACKAGE	75
APPENDIX D - SURVEY COVER LETTER	80
APPENDIX E - COMPOSITION AND PRINTING SURVEY INSTRUMENT USED IN THIS DISSERTATION	82
APPENDIX F - COMPOSITION COSTS PER PAGE.	85
APPENDIX G - CROSS-TABULATION OF FREQUENCY BY COMPOSITION COSTS	87
APPENDIX H - CROSS-TABULATION OF PAPER-OWNED PLANT BY COMPOSITION COSTS.	89
APPENDIX I - PRINTING COSTS PER 1,000 PER FOUR PAGES	91
APPENDIX J - CROSS-TABULATION OF PRINTING COSTS PER 1,000 PER FOUR PAGES BY STUDENT-NEWSPAPER-OWNED PRINTING PLANTS	93
APPENDIX K - TOTAL INVESTMENT OF COMPOSITION EQUIPMENT	95
APPENDIX L - EXAMPLE OF PRINTING CONTRACT.	97
APPENDIX M - NEWSPAPER RECORD SHEET <u>THE UNIVERSITY DAILY KANSAN</u>	99

LIST OF TABLES

Table	Page
I. Quotations from 81 Firms with Typesetting Capabilities	11
II. Cost of Printing and Production of WAUPM Newspapers	23
III. Costs of Printing and Production Per-page as Derived from the 1978 WAUPM Data Package.	24
IV. Number of Pages Printed by WAUPM Newspapers in 1977.	25
V. Number of Daily and Weekly Publication Respondents.	39
VI. Number of Tabloid and Standard Respondents	39
VII. Number of Respondents doing Composition by School-owned, Student-newspaper-owned or Off-campus commercially.	40
VIII. Number of Respondents doing Composition, Printing by School-owned Facilities.	41
IX. Number of Respondents Printing Off-campus commercially versus School-owned, Student-newspaper-owned.	41
X. Primary Source of Income for Fall 1977 ,	42
XI. Respondents Reporting Formula for Determining Yearly Newspaper Budget.	42
XII. Relative Per-page Composition Costs of Observed and Expected Number of Weekly and Daily Newspapers	44
XIII. Relative Per-page Costs of Observed and Expected Number of Paper-owned, Non-Paper-owned Plants, and Papers Doing Own Composition	46
XIV. Average Composition Cost of Tabloids and Standards Per-page	47

Table	Page
XV. Average Per-page Composition Costs of Student-newspaper-owned, School-owned and Off-campus Commercial Plants	48
XVI. Difference of Composition Costs of School-owned, Student-newspaper-owned and Off-campus Commercial Plants	49
XVII. Relative Cost per 1,000 Four Pages Printing Costs of Observed and Expected Number of Paper-owned, Non-paper-owned Plants and Papers Doing Own Composition.	51
XVIII. Average Cost of Tabloids and Standards per 1,000 Copies per Four Pages.	52
XIX. Average Printing Costs of Student-newspaper-owned, School-owned and Off-campus Commercial Plants.	53
XX. Post-hoc T-test for Printing Costs for Cost per 1,000 per Four Pages of School-owned, Student-newspaper-owned and Off-campus Commercial Plants	54
XXI. Printing Investment of Colleges Reporting Student-newspaper-owned Equipment.	56
XXII. Total Equipment Cost Comparisons of Student-newspaper-owned Composition and Printing Plants.	57

FIGURE

Figure		Page
1.	Cost Element and Profit Leader Profile - 1973	27

CHAPTER I

INTRODUCTION

Traditionally the typewriter has been the basic newsroom tool, serving as an efficient way to put ideas on paper. Recently, rising costs in printing, paper and postage have led to a reassessment of longstanding communication methods, spurring research and development specialists to seek improvements in production processes. One result has been the ability to "typeset" rather than "typewrite." Typesetting had required an additional production step that often negated its potential economies. Thus, it became necessary to wed word processing to typesetting so that information generated by normal office typing could serve as a direct input for typesetting.¹

This triumph of research and development did not arrive overnight. The printing industry remained locked in status quo until the 1950s, relying chiefly upon typewriters and hot-metal technology. However, with the rapid advancement of electronics in the 1950s and 1960s, it became apparent that the hot-metal process was doomed.² The 1970s saw computerization make giant strides in many industries, including publishing, and printers began computerized typesetting, composition, and even pagination (the ability to edit a page of copy at a video display terminal).³

The National Composition Association, a section of the Printing Industries of America, in its 1978 Typographers Ratio Report, has

analyzed the financial performance of leading typographic firms nationwide. According to the report, phototypesetting firms showed an average net increase in income before taxes of 4.36 percent compared to 1.60 percent for firms using predominantly hot-metal technology.⁴ Phototypesetting also scored an impressive lead of 7.96 percent (per \$100 of sales) return on investment versus hot-metal firms averaging 3.95 percent.⁵ Hot-metal operations had an average factory payroll of 59.93 percent (of sales) while photocomposition firms were at 36.35 percent.⁶

The Printing Industries of America has encouraged all printers to know their true costs and has provided the means for establishing them. This trade association is dedicated to fulfilling printers' needs. It realizes true costs are essential for intelligent decision-making, profit and survival.⁷ The majority of printers probably do not know their true costs.⁸

The validity of this statement may be established with one account reported. The Government Printing Office had bids showing prices of \$3,149, \$6,625, \$6,715, \$9,800 and \$13,150 on a four-color brochure of 16 pages.⁹ The bids came from printers with equipment that the GPO felt could handle the printing. And, according to the PIA, this example is not isolated, but all too typical.¹⁰

It seems clear, then, that improvement in cost analysis among college newspapers is a small but vital part of a national need, the resolution of which this dissertation seeks to further.

Almost all recent major advancements in printing technology have centered on computer-oriented systems. The improved systems have moved from the pressroom to the typesetting room in the past few years, and

now the systems are moving more steadily into the newsroom.¹¹

With new advances in low-cost phototypesetting equipment, college newspapers have experienced similar changes in composition and printing. These changes among today's college newspapers, whether daily or weekly, have been motivated in part by such economic problems as inflationary costs, paper shortages, and increases in postal rates.

Statement of the Problem

While numerous theses and dissertations have studied college communications media from many points of view, this study is concerned with the lack of current information on composition and printing costs of college newspapers. To date, it appears, no clearly defined information exists on costs resulting from the advent of electronics technology. There has been little information on how and why college newspaper advisers, publishers and directors of student publications have made decisions on the actual purchasing, leasing or renting of computerized typesetting and press equipment.

Statement of the Purpose

The purpose of this study was to examine similarities and differences in operating and management procedures of college newspapers. The author has compared composition and printing costs of college newspapers printed (1) by contract with commercial publishers, (2) college-owned equipment, and (3) by equipment purchased by and for the student newspaper itself. The study also provides opinions of newspaper administrators regarding cost problems, equipment purchasing and hiring of qualified equipment operators.

Newspaper advisers from four-year colleges were queried on their composition and printing costs. A major aim was to compare the views of college newspaper advisers on the most economical publishing procedures.

Limitations of the Study

The study was limited to 250 colleges and universities randomly selected from the 1977-78 Director of the College Student Press in America. The researcher gathered data on composition and printing costs, and the methods used to publish newspapers most efficiently and economically. The study did not seek attitudes and opinions regarding such matters as the instructional value of the college newspaper.

The investigator assumed that subjects surveyed would respond objectively, as most items called for specific costs of composition and printing. It was further assumed that, because of their administrative duties, respondents would have access to accurate information on the data sought.

Because 90 percent of those contacted provided useful data, this study will be accepted by many as an accurate reflection of the state of student newspaper production in 1979. However, the reader is cautioned to remember that atypical arrangements do exist, and that fluctuations in data may be influenced by factors beyond the investigator's personal knowledge.

Definition of Terms

It would seem to be useful to provide those with limited experience in modern newspaper production technology with some basic terms which

are essential to the present study. They are:

Camera-ready copy: The final pasteup of type and artwork into a camera-ready entity, ready to be converted photographically to a full-page negative and subsequently to a thin-metal wraparound printing plate for rotary offset reproduction.

Composition system: This comprises a proper blend of machines, people and procedures to produce a quality typographic product at the least possible cost. The system covers the entire process from initial copy handling to the finished product, and the actual typesetting is only one part of this over-all process.

In a typical composition system, the copy may pass through many hands. The major operations are markup, input (keyboarding), typesetting, processing, proofreading, correction (if necessary), pasteup (page makeup), and proof preparation. Additional correction routines may be needed in some cases.

CRT: Specifically, a Cathode Ray Tube, but more generally used to describe a high-speed electronic phototypesetting device which generates characters on the face of a television-like tube. A CRT may be referred to as a Visual Display Terminal. A VDT, an electronic keyboard combined with a television-like screen which graphically displays input, allowing for direct on-line proofreading and corrections. Can be connected to a computer or operated independently, depending on the needs and/or limitations of the newspaper.

OCR: Optical Character Recognition, refers to the technique and machines that electronically can "read" printed or typed information or input. Also called scanning. Now largely being replaced by VDT systems.

Phototypesetting: Phototypesetting is the creation of typographic

images on photographic materials which optically project or expose these images on the unexposed paper or film. The paper or film is developed to produce the typographic images.

The phototypesetting process had advantages for a wide variety of typographic applications. It is limited only by the individual capabilities of specific photographic typesetting equipment. This equipment, noted for its speed and its ability to mix typefaces and sizes, covers a range from relatively basic to highly sophisticated composition. It is a highly productive process permitting a multiplicity of input devices for each output unit.

END NOTES

¹"Why the Marriage Between Word Processing and Typesetting?"
Phototypesetting, Etc. (September-October 1977), p. 3.

²Ibid.

³Ibid.

⁴"Phototypesetting More Profitable than Hot Metal," Typeworld
(August, 1978), p. 4.

⁵Ibid

⁶Ibid.

⁷"An Ineffective Cost System Results in Improper Decision-Making,"
Typeworld (January 1978), p. 19.

⁸Ibid.

⁹Ibid., p. 20.

¹⁰Ibid.

¹¹William R. Steng, "A Survey of Newsroom Computer Technology in
News-Editorial Sequences in Departments, Schools and Colleges of
Journalism" (un pub. Ed.D. Dissertation, Oklahoma State University,
1975).

CHAPTER II

REVIEW OF THE LITERATURE

Since little information or research has been made of the business aspects of the college newspaper, the author reviewed the literature of the trade publications of the printing industry. This review was conducted to show and explain the wide range of thought in the area of cost accounting in the printing industry. It is presented as a focal point for college newspaper advisers.

Cost: The General Situation

In a free-enterprise system, competition in the marketplace is based on service and price. To many customers, price is of such great significance that typographers who fail to meet the lowest bid are not even considered for a job.¹ It is imperative, therefore, that typesetters have a thorough understanding of the market price for their product if they are to compete effectively.² Antitrust laws forbid any discussion among competitors that may affect price levels. Thus, it is illegal for typographers to exchange price sheets with competitors where the effect of such exchange would stabilize a market.

A PIA Pricing Study

Many typesetters do not price their products effectively because they have a misunderstanding of the industry's market pricing procedures.³

Schneider said that type buyers, on seeing such price differentials, are astonished and confused. They cannot help feeling that high-priced quotes come from rip-off artists and low-priced quotes from fly-by-night operators. Fluctuations of several hundred percent for the same product can only cause customer distrust.⁴

Several factors may account for this, the first being ease of entry into the typesetting market. Today, one can buy machinery for \$10,000 that has the same capabilities that 10 years ago would have cost \$120,000. With the advent of modern-day equipment leasing, rental formulas and the availability of used equipment, the \$10,000 cost needed to enter the market is reduced further. Ease of entry has resulted in a substantial influx of so called "experts" who do not know how to compete as typographers, and who tend to go out of business within a short time. Typographers now have an estimated failure rate of 10 percent per year, and the constant flow of new business into the market has a negative effect on competition where the new competitor is not sufficiently experienced to operate on a sound basis.⁵

A second factor with a major impact on this market is wide-open variation in production methods, leading to corresponding differences in machine costs. The unsophisticated direct input machine, in essence, does the same thing as the most sophisticated video display terminal with elaborate peripherals. They both set type. To the cost-conscious customer, the make of a typographer's machine is of little significance. However, a firm may use sophisticated equipment for a buyer who does not need such sophistication. This is uneconomical. In essence, the customer is forced to pay the hourly rate for a highly skilled professional to do work requiring only a relatively unskilled typesetter.

Type buyers not familiar with different types of equipment are astounded by bids which vary tremendously from firms believed to be reputable.⁶

A final factor of major significance involves the newness of photocomposition technology. This new technology---continuing to develop at a rapid pace---has made obsolete the conventional wisdom that printers and typesetters have collected over almost a century of hot-metal experience. Hot-metal enabled printers to develop standards and procedures that accurately predicted the actual cost incurred in any given job. In photocomposition, much still has to be done before one can predict cost with certainty.

To illustrate, Schneider asked typesetters from advertising agencies, commercial print shops, job shops and book or trade shops to submit bids on four jobs. The typesetters were to assume the customer was longstanding and paid promptly. The turn-around time was normal and the bid was to be on a per-page basis. The price was to include proofreading at both the galley and page states, two sets of proofs and delivery of camera-ready copy.⁸

The copy was regular straight matter on 6-by-9-inch pages; image area 27 by 45 picas; text 10/12 Times Roman, 2.6 characters per pica. Bids were tabulated and presented as in Table I.⁹

These figures show a wide gap between the high and low bids received. On the average, the high bid was four to six times greater than the low bid.

A review of the literature sheds light upon several questions by the foregoing. What does the literature say about the printing industry? Is it profitable or reasonable to own or rent phototypesetting equipment? What are the problems?

TABLE I
 QUOTATIONS FROM 81 FIRMS WITH
 TYPESETTING CAPABILITIES

	Advertising (16 bids)	Commercial (32 bids)	Job (14 bids)	Book (19 bids)
High	\$35.00	\$25.00	\$34.50	\$32.00
Low	7.50	5.40	4.25	2.27
Median	20.00	11.50	11.75	10.45
Average	20.84	12.46	16.29	12.43

Reports From Trade Publications

Literature concerning time and cost savings in photocomposition was found in many journal and specialty publications. The most useful are discussed briefly in this section.

Deaver said that, although in-plant typesetting is not for every shop, the reasonable prices and dependable operation of today's phototypesetters are leading many to consider installing their own equipment.¹⁰

In-plant printers traditionally have relied heavily on commercial printers and typesetting shops for production of type. Most of in-house shops were not able to have large Linotype or Intertype installations or personnel required to operate and maintain them.

Although in the late '40s and into the '50s, in-plant shops were small, a number of shops proliferated. This meant that in-plant operations rarely could consider a major investment in typesetting equipment---especially the very latest expensive phototypesetters.¹¹

So, recently, as phototypesetter costs have fallen markedly, many in-plant printers have taken a second look at the advantages of doing their own composition. And, since few shops had extensive linecasting equipment, the question became one not of replacing hot metal with cold type, but of producing type internally vs. purchasing type commercially.

With so many commercial shops producing quality typesetting at competitive prices, what are the advantages gained by an in-plant shop that purchases phototypesetting equipment?

One advantage is economic. Depending on the amount and the nature of the type set by one's organization, substantial savings may be realized by investing in a phototypesetter. A second advantage is that phototypesetting systems easily grow to suit the needs of any shop as it expands. It is not necessary to buy a system much more elaborate than present needs demand. A third advantage is the saving in time. Even if a commercial typesetting house is nearby, there always is a delay in deliveries and galley transfers. A final advantage is that the majority of phototypesetting devices of interest to an in-plant printer are simple to operate.¹² Deaver said:

If an in-plant printer suspects that his should would benefit from a phototypesetting system, how should he proceed? He ought to assess his typesetting needs, find out exactly what he pays for commercial typesetting, talk with equipment manufacturers, and find the units that will best fill his needs.

A simple comparison of cost of typesetting vs. cost of typesetter will reveal the advantages of purchasing a unit, keeping in mind that a phototypesetter is an investment that will last for years. (Some graphic specialists estimate that this investment will be fully depreciated within 3 to 5 years.)

Should such a comparison indicate the feasibility of buying (or leasing) a typesetter, the next step would simply be working out the details with the manufacturer or dealer.

It was not too long ago that the cost of phototypesetters scared away many potential users. Now, however, with low prices and simple, dependable operation, in-plant printers should consider a simple phototypesetting system as a way to save time and money and as a means to meet future typesetting and copy processing needs.¹³

Another report of interest was a hospital in Hinsdale, Illinois. Printing department staff members did not know exactly how much their in-house phototypesetting and printing operation was saving the hospital, but they did know the equipment paid for itself many times over. The hospital had a fully equipped print shop, which included equipment and materials for layout, graphic arts camera, stripping, and platemaking, as well as presses and bindery.¹⁴

When the hospital's print shop staff found facilities insufficient for typesetting the diversity of publications, the shop manager added a computerized phototypesetting machine that produced type for headlines and copy twice as fast as a commercial printer. Since then, all the hospital's departmental printing needs---from simple business forms to four-color publications---have been met. No major jobs had to be sent out for typesetting. The hospital has saved an estimated minimum of 50 percent on printed materials.¹⁵

The graphic arts department of three-full-time persons and one part-time student could handle at least 70 jobs concurrently. Proofs were supplied on each project. Corrections were immediate and virtually cost free. Down time has been no problem. Since the phototypesetting machine was installed several years ago, there has been no need for outside repair.¹⁶

In another in-house example, a media production center operated within the employee information division of Cincinnati Bell Telephone Company saved \$51,430 over outside supplier costs during the first year

of operation. At the same time, it achieved the division's goal of providing flexibility, creativity, and in-house control.¹⁷

"After a year's experience with the media production facility it is safe to conclude that effective savings will be even greater in the future. It is also safe to conclude that the center is a worthwhile activity," said Bruce B. Newhall, district manager.¹⁸

Newhall bridged the gap between editing and layout of employee publications, all of which was done in-plant, and the actual printing by commercial printers. Production costs on a 32-page employee magazine alone were down 60 percent.¹⁹

How did another firm, Zurich Zmerican Insurance Company, justify a \$25,000 investment in phototypesetting equipment?

Wayne Perk, publications manager, said it was easy. The investment enabled Zurich to trim typesetting costs by 57.5 percent. On some jobs, cost was reduced as much as 80 percent.²⁰ These percentages were based on a five-year amortization period for the investment, and cost of operator wages.²¹

Zurich had spent about \$50,000 per year for out-of-house typesetting at its Chicago operation. From June 15, 1977, to December 31, 1977, the company set type in-house on its new equipment. Outside costs for that period would have been \$21,765. In-house, the cost was \$9,916.²²

To illustrate how per-job savings were as much as 80 percent, a cost analysis was made for a training manual: A large Chicago-area typesetter estimated that the job would cost Zurich \$3,240 to set the type with a vendor. In-house, it cost \$655.59. That figure was based on machine operating costs of \$17,000 per year (\$5,000 depreciation

expense and \$12,000 operator wages), taken across the 1,595 hours in Zurich's work year. Cost per hour of typesetting was \$10.66, and the training manual took 61.5 hours.²³

According to a market brief published by Compugraphic Corporation, magazine publishers are moving to in-house typesetting. The brief reported:

The typical magazine that runs 50 editorial pages per monthly issue (estimated type cost \$25 per page) spends \$15,000 per year on typesetting. A magazine with 100 monthly editorial pages will spend \$20,000 per year (the larger the job, the lower the cost per page). Naturally, the circulation will have no bearing on typesetting costs, since basic typesetting expenses are the same, per page, But, the smaller the circulation, the greater the percentage of dollars spent on typesetting.

High cost visibility makes for easier selling!

According to a recent study conducted by Folio Magazine, 34% of the 433 respondents reported that they are currently doing all or part of their typesetting in-house. This percentage (sic) is sufficiently large to indicate that Publishers are indeed viewing in-house typesetting as a viable means to cut costs.

In addition to saving money, several Publishers are viewing their typesetting operation as a profit center! Once they get the hang of doing their own work, many take in work of others.²⁴

One magazine publisher, Ted Gordon, who is responsible for 11 different publications, said that before he makes a decision to invest in new equipment, he evaluates all costs, time savings, required backup and personnel changes that will be affected.²⁵

Gordon said:

Costs are skyrocketing [in the areas of] paper, printing, postage, labor. There's no end in sight. As a publisher, I cannot justify passing those increases along to my advertisers. We are forced to look for other ways to cut costs, and in-house typesetting is certainly a viable way to do that. I have looked at our costs per page of type. Before, we spent \$74.00 per page. Now, in-house, we spend about \$55.00 including cost of equipment plus two

people - a production manager and a typesetter. This is significant.²⁶

Other magazine publishers have praised in-house typesetting.

"After figuring equipment cost, operators' salaries, fringe benefits, etc., we estimate our equipment saves us more than \$40,000 a year. But even if we didn't save a nickel, it would still be worth it because of the time we save," said Lew Roth, of Hi-Torque Publications.²⁷

Lyle Krueger, production director of Alaska Magazine, said:

"Two operators set about 4,3000 pages per year, including fast-breaking news up to 48 hours before press time. We would probably operate the system at a loss just to have the advantage of setting our own type."²⁸

The new technology has found its way even to the high school student newspaper. The Pinellas County high school newspapers are produced in St. Petersburg, Florida, by students who are responsible for the product from typesetting through printing.²⁹ These students are acquiring new skills, and the papers are saving money which otherwise would be spent on commercial composition. Pinellas papers regularly run process color, multi-color graphics and typographical displays.³⁰

They receive no school funds, but support themselves by selling advertising and by paid circulation.³¹

Literature dealing with photocomposition shows a spectacular growth in the market when one considers that the linotype machine has been in continuous operation with few technological improvements for 100 years. Machinery manufacturers estimate that potential in-house installations will reach 80,000 in 1980, and predict a dollar sales for 1979 in excess of \$100 million, up from the \$25 million in 1973 by the same in-house market.³²

More and more, it appears the typesetting business will respond

most favorably to good management. But scholarly literature has not defined clearly what constitutes good management. One model to help management decide the difference between a successful operation and a marginal operation was presented by an economic analyst for the graphic arts.

In How to Earn, Control and Maintain Your Profits in Typesetting, Post reported several key management factors.³³

1. An ability to understand and apply the basic principles of good marketing and sales techniques.
2. Effectively using the tools of planning and development.
3. The ability to monitor the results and interpret the meaning for corrective purposes.
4. Control and implementation of budgetary practices and good cash management.
5. Development of second line management and practices of personnel development.³⁴

Post said, "Although good current equipment and technology can solve many production problems, a company's biggest asset must be its managerial ability. This is true in areas of operations, marketing, financial management and training and development."³⁵

The business plan should allow for long- and short-range goals. Clearly defined, specific objectives must be the criteria for each operation of the plan. Ability to easily monitor and correct criteria objectives is a prime requisite of good management.³⁶

Earlier Academic Research

Cost and management studies of college publications are not abundant. The literature shows little research in these areas. College Press Review, the official NCCPA publication, has not printed

a study of budget or management techniques in more than 18 years.

The 1960 NCCPA Study

A 1960 National Council of College Publications Advisers newspaper survey showed 9.2 percent of the sample papers printed by offset.³⁷ Increased costs of labor, machinery, engraving and other letterpress requirements led to the rapidly increasing use of offset, as did higher quality in reproduction, especially news photo reproductions.

The 1960 NCCPA study found the number of newspapers printed by college in school-owned print shops decreasing.³⁸

The Butler Study

What appears to be the last comprehensive study of the campus press was conducted by Butler (1963), in conjunction with the NCCPA.³⁹ Butler's study examined college newspapers, yearbooks and magazines with an emphasis on costs. The study was descriptive, reporting numbers and percentages without probability data. Butler's basic premise was that information on income and expenses could be used by management to determine whether a particular publication had excessive costs. These factors were based on wage costs, number of employees, type of equipment, and cost of utilities and supplies. Butler's objective was to report the costs of printing, and the methods the colleges were using in the everyday operation of the college newspapers. His study proved to be a conglomeration of facts related to the college press.

However, the Butler study, made three years after the 1960 NCCPA study, showed 23.6 percent of the college newspapers printed by offset.⁴⁰

Butler also noted the frequent use of commercial shops due to increased operating costs in smaller campus print shops.⁴¹

Butler concluded that almost half of all college newspaper publishing ventures were profitable businesses. Based upon data from 41.1 percent of the respondents, the average profit for larger papers was \$2,179 and for smaller papers, \$278.⁴²

It is impossible to compare Butler's results with other campus publication surveys. He encompasses responses of 186 institutions (314 completed questionnaires) or a 15 percent response. Butler mailed 1,240 questionnaires.⁴³

One project which merits careful consideration, however, is the research conducted by Ingelhart (1973).⁴⁴ In his extensive two-year study, sponsored by the National Council of College Publications Advisers, Ingelhart concluded that "no single student publication plan can be prescribed for American colleges to follow."⁴⁵

Ingelhart's major hypothesis of his study was to prove that college newspapers, which had previously labeled themselves as "independent" from all university funding and administrative control, were very dependent. Ingelhart did not concern his study, however, with the actual costs of composition and printing.

The Tenney Study On Equipment

A recent study by Leland Tenney at Oklahoma State University provided information on available machines to be used for instruction in newsroom technology and for production of the campus newspaper, The Daily O'Collegian.⁴⁶

First-generation equipment was researched and engineered at great

cost and was restricted to larger newspapers. Within the past year, new and cheaper components have been developed and there is competition for survival among the manufacturers and distributors. The OSU study sought to determine amounts and kinds of equipment necessary for proper instruction of journalism students and efficient production of The Daily O'Collegian, as well as to recommend to the board of directors of The O'Collegian Publishing Company the equipment to be purchased.⁴⁷

An important decision was whether to purchase a simplified system using a storage unit for information filing and retrieval or to seek a more complicated and versatile system using programmable computers. A realistic budget was paramount to any purchase. The overriding question was, "Can a computerized newsroom be bought with funding available, one which must provide 'backup' capabilities to meet deadlines when mechanical failure or software problems render the system inoperable?"⁴⁸

One facet of Tenney's study was description of equipment, including the name of the company and what the equipment could do. (See Appendix A.) Cost also was important. Tenney noted with accompanying table not only the parameters of the equipment, but the base prices.

The Sublette Study on Equipment

A study similar to Tenney's was that of Dick Sublette, University of Illinois student publications director. In his proposal to the board of student publications, cost was listed as the first consideration.

Cost: What is the cost of the basic system? What is the cost of adding 8 more VDT's? It must be realized that the basic system is stated in terms of machines (hardware) and that the capabilities of machines vary greatly from vendor to vendor. For instance the amount of storage in a computer, the editing capabilities, and the file

management program are different in each system. Does the basic price really contain sufficient storage and back-up?⁴⁹

Sublette's proposal was accompanied by a chart of the various systems recommended as possibilities for the student newspaper, The Daily Illini. (See Appendix B.)

The Steng Study

Another recent study related to the present research was that of Steng.⁵⁰ His dissertation indicated a lack of newsroom computer equipment available for instruction in college and university news-editorial sequences. This seemed to be largely related to economic factors faced by journalism program administrators. A less salient point was the belief by some administrators that the mission of news-editorial sequences is to train newsmen, not to train researchers and computer scientists. Increasing enrollments, lack of space in journalism facilities and the competence of faculty in newsroom technology were other factors.⁵¹

Data From The WAUPM Report

One college newspaper study is conducted each year by the Western Association of University Publications Managers, formerly known as the Pacific Coast Publications Managers. This group of 25 advisers meets annually to discuss issues, problems and finances of college publications.

The WAUPM meeting is open to member schools. Each completes a comprehensive questionnaire covering the fiscal accounts of the previous year with special emphasis on the fall semester. Schools compare

production data and note increases or decreases and why either might have occurred. (See Appendix C.)

All member institutions publish at least four days a week and represent small, as well as some larger schools. All schools use a tabloid format except University of Oklahoma, University of Texas, Indiana University, Texas Technological University, Michigan State University and Ohio State University, which are full-size or standard newspapers.

Relevant to this study are WAUPM's reported costs of printing and production, both over-all and per page.

Two schools were singled out of the WAUPM 1977 Data Package. Southern Methodist University and University of Oklahoma both reported significant cost variations from the previous year. An example in Table II would be Southern Methodist University's reported printing and production cost decrease from 1976 to 1977 (\$50,981 vs. \$39,698). The \$11,283 difference was reported as part of the savings from the newspaper's purchase of its own equipment and having composition done internally rather than at the University print shop. Also, Table III shows that SMU was able to decrease costs per page from \$54.94 to \$33.30.

Schools noting significant increases or decreases inform members what plans were adopted or problems confronted with the changes.

Table III also shows the University of Oklahoma increased costs (45.71 vs. \$91.01). OU changed from a tabloid to standard size broad sheet format late in 1976, boosting costs 100 percent. These two tables aid WAUPM members' discussion of costs, even though each school may be using different equipment; paying different salaries for part-

time student employees; sharing expenses with the journalism program;
or other variables which may change costs.

TABLE II
COST OF PRINTING AND PRODUCTION
OF WAUPM NEWSPAPERS*

	1973	1974	1975	1976	1977
Oregon State	\$ 51,524	\$ 52,240	\$ 59,055	\$ 62,177	\$ -----
Arizona State	62,093	69,454	82,995	54,566	83,302
New Mexico	56,379	61,807	74,024	83,467	79,660
Hawaii	-----	-----	55,723	77,354	65,686
Idaho	17,226	23,414	30,044	30,044	17,909
UC Santa Barbara	56,146	60,882	70,733	75,595	83,326
CSU Northridge	37,035	38,284	40,861	44,102	42,374
Oregon	76,879	-----	108,396	94,959	131,273
Washington State	69,751	67,463	75,774	84,693	91,672
Washington	171,127	186,456	244,420	227,760	-----
UCLA	153,012	-----	202,051	204,836	236,702
So California	56,680	58,496	60,611	60,452	83,395
Arizona	117,134	125,062	154,466	171,138	194,585
CSU Los Angeles	45,938	52,415	44,562	48,257	52,567
Houston	56,065	59,433	70,760	91,948	95,520
So Methodist	-----	-----	43,621	50,981	39,698
Illinois	-----	-----	248,035	291,344	297,465
Oklahoma	135,850	146,866	157,455	198,726	219,878
Texas	213,133	239,916	277,533	367,164	-----
Indiana	178,964	175,536	238,198	234,994	-----
Texas Tech	82,402	94,208	107,580	121,173	106,434
Michigan State	-----	342,881	388,278	394,906	-----
Ohio State	-----	277,151	301,189	-----	-----

*Taken from the 1978 Western Association of University Publications
Managers Data Package

The WAUPM data also are used to note if cost increases or decreases

are affected by the number of pages printed, as indicated in Table IV.

TABLE III
COSTS OF PRINTING AND PRODUCTION PER
PAGE AS DERIVED FROM 1978
WAUPM DATA PACKAGE

	1973	1974	1975	1976	1977
Oregon State	\$27.44	\$ 27.67	\$ -----	\$ 32.32	\$ -----
Arizona State	51.70	54.42	59.28	37.79	41.71
New Mexico	41.82	44.02	49.35	50.28	46.05
Hawaii	-----	-----	107.16	127.85	108.75
Idaho	-----	41.55	34.30	38.83	20.54
UC Santa Barbara	37.81	37.67	40.60	40.29	43.00
CSU Northridge	40.55	36.46	36.35	42.08	35.19
Oregon	28.18	-----	-----	41.14	48.91
Washington State	53.16	51.89	56.55	64.55	68.82
Washington	71.90	74.82	93.29	92.74	-----
UCLA	58.40	-----	64.93	65.07	65.60
So California	37.97	41.90	42.93	41.46	48.88
Arizona	55.57	55.83	61.39	70.02	72.71
CSU Los Angeles	49.08	57.98	47.81	51.01	50.45
Houston	37.88	41.04	44.34	57.47	58.39
So Methodist	-----	-----	59.27	54.94	33.30
Illinois	-----	-----	44.32	48.80	47.73
Oklahoma	35.60	46.01	38.74	45.71	91.01
Texas	87.71	90.47	98.84	110.59	-----
Indiana	44.97	47.78	66.50	68.31	-----
Texas Tech	71.41	72.25	85.93	88.19	77.58
Michigan State	-----	106.68	112.61	111.18	-----
Ohio State	-----	137.20	155.90	-----	-----

Oklahoma and Southern Methodist are worth noting again. Oklahoma shows a decrease in pages (4,348 to 2,416) because of change in size; a price per-page nearly twice the previous year (\$45.71 to \$91.01); and a

printing and production cost increase of \$21,152 (\$198,716 to \$219,878).

TABLE IV
NUMBER OF PAGES PRINTED
BY WAUPM NEWSPAPERS
IN 1977

	1973	1974	1975	1976	1977
Oregon State	1,513	1,888	1,868	1,924	2,164
Arizona State	1,200	1,277	1,400	1,444	1,997
New Mexico	1,348	1,404	1,500	1,660	1,730
Hawaii	-----	624	520	605	604
Idaho	522	564	876	774	872
UC Santa Barbara	1,485	1,616	1,742	1,876	1,938
CSU Northridge	1,094	1,050	1,124	1,048	1,204
Oregon	2,728	-----	-----	2,308	2,684
Washington State	1,312	1,300	1,340	1,312	1,332
Washington	2,380	2,492	2,620	2,456	-----
UCLA	2,620	-----	3,112	3,148	3,608
So California	1,372	1,396	1,412	1,458	1,706
Arizona	2,108	2,240	2,516	2,444	2,676
CSU Los Angeles	936	904	932	946	1,042
Houston	1,480	1,448	1,596	1,600	1,636
So Methodist	-----	-----	736	928	1,192
Illinois	-----	-----	5,596	5,970	6,232
Oklahoma	3,844	3,192	4,064	4,348	2,416
Texas	2,430	2,652	2,808	3,320	3,598
Indiana	3,980	3,674	3,582	3,440	-----
Texas Tech	1,154	1,304	1,252	1,374	1,372
Michigan State	-----	3,214	3,448	3,552	3,110
Ohio State	-----	2,020	1,932	-----	-----

Southern Methodist, on the other hand, cut printing and production costs (\$50,981 to \$39,698), a decrease in page costs (\$54.94 to \$33.30), and an increase in number of pages printed (928 to 1,192).

The variable not accounted for between the two schools remains unknown. A factor not built into the WAUPM study is composition on a per-page-cost versus printing costs. Both prices are built into one. Oklahoma University composes and prints by newspaper-owned equipment and prints off-campus commercially.

The Hughes Profit-Cost Analysis

One of the most valuable references related to the present reserach is that of Thomas Hughes.⁵² In another PIA study, he originated a system of analysis that may be useful to advisers. In his book, Profit Leadership in Printing, Hughes said:

Now I am sure that almost everyone can purchase a piece of equipment if he has the capital to do so. He can rent space and produce some end product. He may even be able to sell it. But to operate his business at a fair-to-good profit is something else. From the sum total of all goods and services produced by our industry - from small trade shops in typesetting, or plates or bindery, to the largest, finest companies among us - only a handful really make it as far as good profitability is concerned.⁵³

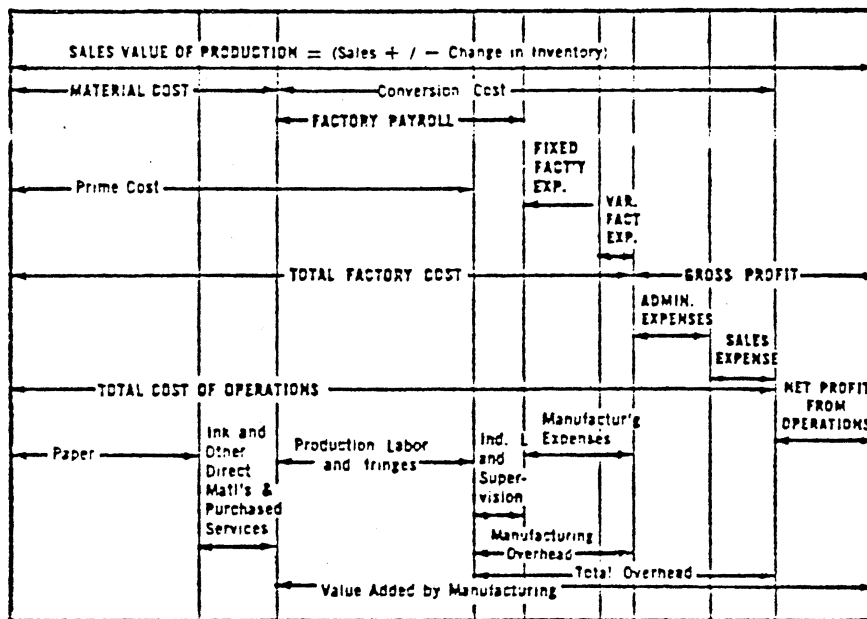
Hughes said the best way to operate successfully is to reach the company's goals or objectives by keeping cost elements under control. "I have yet to see a profit-leader firm that ignored these various cost elements. They live with them, and above all, control them." he said.⁵⁴

Hughes presented a picture of total production sales value, as shown in the 1973 Printing Industries of America Ratio Study (Figure 1), and said part of management's over-all problem is confusion and misunderstanding over terminology.⁵⁵ The terms are overlapped in the parameters of the given ratio study.

Hughes said there are six major cost elements and a set of combinations of these six, plus some differentials to equal all (see

Figure 1). All areas need defining if management is to understand printing terminology.⁵⁶

Figure 1 begins with production sales value which comprises sales plus or minus the change in the value of finished inventory and work in process.



Source: 1973 Printing Industry of America Ratio Study, elements shown to scale.

Figure 1. Cost Elements and Profit-Leader Profile - 1973

Then come the four main factory cost items:

1. Material Cost is divided between paper and other costs, the latter being further divided into ink, direct press supplies and

outside-purchased services. If a printer has a press operation only, then perhaps this one line in the summary report will be the total of various accounts for such items as type and art, platemaking and camera, and bindery and other finishing operations.⁵⁷

2. Factory Payrolls represent the largest single cost element. There are four parts to this element: direct labor at the various cost centers and their related fringes and payroll taxes. The other parts are indirect labor and supervision together with their related fringes and tax contributions by the company. Of course, in that portion of data called "payroll distribution," there may be charges distributed in a multiplicity of accounts.⁵⁸

3. Fixed Factory Expenses usually are comprised of depreciation and other "fixed costs." These are not fixed in the exact, literal sense, but are costs that time and day-to-day production decisions do not affect. They just remain the same regardless of amount of production.⁵⁹

4. Variable Factory Expense, however, follows the production cycle very closely. As it increases, supply and miscellaneous charges also increase.⁶⁰

Administrative or office expenses and sales expenses complete Figure 1. In short, a dearth of data are available from which college newspaper advisers may compare composition or printing costs. Perhaps Schneider offered the best suggestion to the college newspaper adviser:

The business must know the market. The typesetter needs to know what kind of equipment is available and suitable to the operation. The word suitable is the real key. A firm should not accept or seek out poor standards in equipment. Create a specialty, carve out an area in the typesetting area which will work for the organization. This allows you to set up a system in your plant and more easily expedite work through the plant.⁶¹

END NOTES

¹Emery E. Schneider, A Practical Exercise in Printing (Washington, D. C., 1978), p. 3.

²Ibid., p. 4.

³Ibid.

⁴Ibid., p. 7.

⁵Ibid.

⁶Ibid.

⁷Ibid., p. 11.

⁸Ibid.

⁹Ibid.

¹⁰Jeff Deaver, "Should You Set Your Own Type?" GAM, VIII (1975), p. 32.

¹¹Ibid.

¹²Ibid.

¹³Ibid.

¹⁴"Print Shop Saves Time and Money, Improves Quality," Hospitals, LI (1977), p. 20.

¹⁵Ibid.

¹⁶Ibid.

¹⁷"Print-Ready Production Center Increases Flexibility," Modern Office Procedures, XXI (1977), p. 18.

¹⁸Ibid.

¹⁹Ibid.

²⁰"In House Phototypesetting is Investment in More Control, Less Costs," Modern Office Procedures, XXI (1977), p. 39.

²¹Ibid.

²²Ibid.

²³Ibid.

²⁴"Cash In on the Magazine Publishers' Move to In-House Typesetting," Publications Market Brief (January, 1977), p. 1.

²⁵"In-House Typesetting is a Viable Means of Cutting Cost," Publications Market Brief (January 1977), p. 10.

²⁶Ibid.

²⁷"Eight Magazine Publishers Tell Why They Made the Decision to Set Their Type In-House," Compugraphic Brochure (May 1976), p. 4.

²⁸Ibid.

²⁹"School Editors Learn Production Techniques," Educational Market Case Histories (Fall 1977), p. 1.

³⁰Ibid.

³¹Ibid.

³²Ibid.

³³Jack M. Post, How to Earn, Control and Maintain Your Profits in Typesetting (Salem, N. H., 1978), p. 25.

³⁴Ibid.

³⁵Ibid., p. 27.

³⁶Ibid.

³⁷Ibid.

³⁸Ibid.

³⁹Glen Butler, "A Cost Analysis of College Student Publications" (unpub. Ed.D. Dissertation, Oklahoma State University, 1963).

⁴⁰Ibid., p. 3.

⁴¹Ibid.

⁴²Ibid.

⁴³Ibid.

⁴⁴Louis E. Ingelhart, The College and University Campus Student Press (Muncie, Ind., 1973).

⁴⁵Ibid.

⁴⁶Leland Tenney, "The Selection of a Typesetting System for Journalism Instruction at Oklahoma State University and Production of The Daily O'Collegian" (unpub. M.S. thesis, Oklahoma State University, 1976).

⁴⁷Ibid.

⁴⁸Ibid.

⁴⁹Richard Sublette, "A Report to the Illini Publishing Board," (May 1977).

⁵⁰William R. Steng, "A Survey of Newsroom Computer Technology in News-Editorial Sequences in Departments, Schools and Colleges of Journalism" (unpub. Ed.D. Dissertation, Oklahoma State University, 1975), p. 129.

⁵¹Ibid.

⁵²Thomas Hughes, Profit Leadership in Printing (Philadelphia, 1976), p. 65.

⁵³Ibid., p. 67.

⁵⁴Ibid., p. 68.

⁵⁵Ibid., p. 69.

⁵⁶Ibid.

⁵⁷Ibid.

⁵⁸Ibid., p. 72.

⁵⁹Ibid.

⁶⁰Ibid.

⁶¹Schneider, Ibid., p. 11.

CHAPTER III

METHODOLOGY

This study was undertaken because of the lack of available information on composition and printing costs among college newspapers. There has been no clearly defined body of information concerning such costs since the advent of computer technology. For this reason, the investigator gathered information on what colleges were paying for composition and printing. The study examined management procedures and costs of newspapers composed and/or printed by (1) school-owned, (2) student-newspaper-owned or (3) off-campus commercial facilities. Also gathered were opinions of college newspaper advisers about problems confronting them on costs, equipment purchases and staffing of qualified equipment operators. It was anticipated that this information would offer comparisons of what college newspaper advisers believed to be the most economical way to publish campus newspapers. Such data enabled the investigator to compare costs under these arrangements innumrated above.

Data were gathered from questionnaires mailed to college newspaper advisers. Demographic and open-ended items were used to facilitate comparisons of different procedures for the composition and printing of college newspapers. It was hoped the data would aid the investigator in the offering of conclusions and recommendations for college newspaper advisers and administrators in future college newspaper printing.

The Subjects

Respondents were advisers of four-year college newspapers published either daily or weekly during the academic year. All newspapers surveyed were listed in the 1977-78 Directory of the College Student Press in America. There were 685 four-year colleges reportedly publishing daily or weekly. Those considered daily were printed three or more times per week, while weeklies were printed once or twice per week. From the total, 250 were selected at random. Questionnaires were mailed to advisers by name where possible.

The Survey Instrument

The two-page questionnaire (see Appendix E) asked respondents to:

1. report current means of composing and printing the newspaper;
2. determine if composition equipment was (a) school-owned, (b) student-newspaper-owned or (c) off-campus commercially owned;
3. determine if the printing equipment was (a) school-owned, (b) student-newspaper-owned or (c) off-campus commercially owned;
4. report the sources from which the newspapers received the most income (student fees, student fees/advertising, or advertising);
5. report if the newspaper used a formula for determining the yearly budget;
6. explain the formula used for determining the yearly budget;
7. report composition costs on a per-page basis for tabloid format or standard format composed by the three arrangements listed in 2 and 3 above;
8. report printing costs for a four-page newspaper based on a

quantity contract of the first 1,000 copies for tabloid format or standard format printed by the three aforementioned arrangements;

9. report total investment in composition equipment and what that equipment included;

10. report total investment in printing equipment and what that equipment included;

11. report the number of full-time employees needed in the newspaper's composition and/or printing departments;

12. report if the newspaper had considered, or was considering, changing present composition and/or printing arrangements.

The questionnaire was submitted to a panel at the annual meeting of the National Council of College Publications Advisers in October of 1977. Seven advisers completed the pre-test questionnaire and were asked to make comment upon any of the items which were unclear or unacceptable for other reasons.

Survey Procedures

Each questionnaire was accompanied by a stamped self-addressed return envelope and a cover letter which explained the purpose of, and need for, the study (see Appendix D).

The first mailing was December 20, 1977, and brought 104 responses. The first follow-up was January 4, 1978, in which 70 surveys were returned. A final mailing was January 31, 1978, yielding 45 responses. Of the 220 returns, three were discarded. One college had closed; one newspaper, a military academy publication, was not considered; and one school returned the questionnaire unanswered.

Hypotheses

The hypotheses studied in this research project were:

No. 1: College newspapers using student-newspaper-owned composition equipment operate with lower per-page composition costs than college newspapers using school-owned or off-campus commercial composition equipment.

No. 2: College newspapers using student-newspaper-owned printing equipment operate with lower cost per 1,000 copies per four pages than college newspapers using school-owned or off-campus commercial printing equipment.

Variables

Three independent variables were selected from the questionnaire data. They were:

1. Frequency of publication (daily or weekly). Daily college newspapers were defined as those publishing three or more times per week during the academic year. Weekly newspapers were those publishing once or twice per week during the academic year.

2. Size of publication (tabloid or standard). Tabloid papers were defined as less than 10 inches wide by 17 inches in length. Standard size papers were defined as more than 10 inches wide and more than 17 inches in length.

3. a. Origin of composition. Colleges were divided into three groups according to composition origin: student-newspaper-owned, school-owned or off-campus commercial.

b. Origin of printing. Colleges were divided into the same three groups.

Two dependent variables were used in the study. Since newspaper production was divided into two areas (composition and printing), these parts were considered distinct and totally apart from one another.

1. Composition costs. Schools were asked to report on a cost-per-page basis.

2. Printing costs. Schools were asked to report on cost per 1,000 copies per four pages.

Analysis of Data

This study design called for a multi-faceted analysis. The researcher's job was to gather information which would describe what colleges were paying for composition and printing. The study examined management procedures and costs of all three composition groups.

The SPSS (Statistical Program for the Social Sciences) was available at the Bradfield Computer Center at Southern Methodist University in Dallas, Texas, to compute the necessary statistical calculations. The author wrote the SPSS program for this study and ran a battery of statistical tests to determine significance or nonsignificance of the responses obtained.

The first task of data analysis was to examine the distribution characteristics of each of the independent and dependent variables. Frequencies revealed similar types of descriptive statistics and made possible the generation of tabular reports of absolute and relative simple-frequency distributions for use with variables that assumed only a limited number of values. Frequencies produced statistics such as the mean, mode, minimum, maximum, standard deviation and variance when applicable.

Analysis of variance assessed the relative effects of independent variable levels upon a dependent variable. By analysis of variance, the investigator was able to handle factorial designs that were unbalanced and contained some empty cells.

The chi-square also was used. The chi-square helped determine whether a systematic relationship existed between the variables.

CHAPTER IV

ANALYSIS OF THE DATA

This chapter comprises sections comports to particular questions. In each section, the question is addressed and accompanied by a table reporting relevant responses. Tables are followed by summaries and conclusions of data. All open-ended questions precede summary and conclusions of responses to questions.

The first question asked for the name of the responding university and the name of the newspaper.

As the responses were returned, two items were added. The Director of the College Student Press in America included the frequency of the publications and the page size. These items were not included on questionnaires in the interest of brevity.

Respondents represented 54 daily and 163 weekly papers (Table V). Daily papers comprised 24.9 percent of responses while the weekly papers comprised 75.1 percent.

Tabloids outnumbered standard papers (Table VI). In the survey, 175 tabloids and 42 standards replied, representing 80.6 percent and 19.4 percent, respectively.

Question 1: Does the campus newspaper operate its own printing plant?

This question determined if college newspapers had purchased their own printing equipment (Table VII).

TABLE V
 NUMBER OF DAILY AND WEEKLY
 PUBLICATION RESPONDENTS

	Totals	Percentage of Totals
Daily	54	24.9
Weekly	<u>163</u>	<u>75.1</u>
Total	217	100.0

TABLE VI
 NUMBER OF TABLOID AND STANDARD
 RESPONDENTS

	Totals	Percentage of Totals
Tabloid	175	80.6
Standard	<u>42</u>	<u>19.4</u>
Total	217	100.0

Only 10 schools reported that they were printing their entire newspaper by student-newspaper-owned equipment. This represented 4.1 percent of respondents. Most colleges, 130 or 60.4 percent, reported no printing facilities. Seventy-seven schools reported their papers were composed but not printed by student-newspaper-owned facilities.

TABLE VII
 NUMBER OF RESPONDENTS DOING COMPOSITION
 BY SCHOOL-OWNED, STUDENT-NEWSPAPER-
 OWNED OR OFF-CAMPUS COMMERCIALLY

	Totals	Percentage of Totals
School-owned	10	4.1
Off-campus commercial	130	60.4
Student-newspaper-owned	<u>77</u>	<u>35.5</u>
Total	217	100.0

Question 2: Is the campus newspaper printed in a school-owned print shop?

Only 10 schools in the survey said their newspapers were totally printed by school-owned facilities, while 17 said only composition was done on the paper (Table VIII). Most schools, 190 or 87.6 percent, did not use school-owned facilities.

Question 3: Is the campus newspaper printed in a commercial shop or by job printing?

Table IX shows an overwhelming number of advisers reported papers printed commercially (196 or 90.3 percent). Only 21 schools were printed non-commercially. This was only 9.7 percent of responding schools.

Question 4: Please check only one of the following choices where the campus newspaper receives the most income.

Though income source was not a study variable, it was used to show the even distribution among the 217 school papers regarding income

sources (Table X). The data suggest an almost even source of income with 65 schools reporting the activity fee as the biggest source of funding. Seventy six reported fees and ads were the main income for the paper, while 77 reported ads as the principal income for the paper.

TABLE VIII
NUMBER OF RESPONDENTS DOING COMPOSITION,
PRINTING BY SCHOOL-OWNED FACILITIES

	Totals	Percentage of Totals
School-owned printing	10	5.1
No	190	87.6
School-owned composition	<u>17</u>	<u>7.4</u>
Total	217	100.0

TABLE IX
NUMBER OF RESPONDENTS PRINTING OFF-CAMPUS
COMMERCIALY VERSUS SCHOOL-OWNED,
STUDENT-NEWSPAPER-OWNED

	Totals	Percentage of Totals
Off-campus commercially	196	90.3
School-owned, Student- newspaper owned	<u>21</u>	<u>9.7</u>
Total	217	100.0

TABLE X
PRIMARY SOURCE OF INCOME
FOR FALL 1977

	Totals	Percentage of Totals
Activity Fee	65	30.0
Fee/Ads	76	35.0
Ads	<u>76</u>	<u>35.0</u>
Total	217	100.0

Question 5: Does the school have a formula for determining the yearly newspaper budget?

Many authors have said that a most important area a publication must watch is budget. Yet, in this study, 67.3 percent of the college advisers had no formula for determining the yearly newspaper budget (Table XI).

TABLE XI
RESPONDENTS REPORTING A FORMULA
FOR DETERMINING YEARLY
NEWSPAPER BUDGET

	Totals	Percentage of Totals
Yes	71	32.7
No	<u>146</u>	<u>67.3</u>
Total	217	100.0

Most advisers who said they had a formula chose not to explain how it was derived. However, most said the school's only request was to operate with a break-even rule-of-thumb.

Two advisers reported their only requirement for maintaining a balanced budget was to generate advertising equal to that allocated from student activity fees.

Question 6: Composition Costs (based on per-page costs).

All respondents were asked to compute per-page composition costs. This included all typesetting, paste-up, equipment depreciation and supplies. Appendix F shows how the schools were ranked.

Mean cost per-page was \$29.26. The mode was \$25.00 with a median of \$24.87. The standard error was 1.43. Three schools reported no composition costs and said all labor and supplies were free. One school reported a \$160 page cost.

A crosstabulation of weekly and daily newspaper by the ranking of composition costs based on per-page costs produced a chi-square of 14.63 with 8 degrees of freedom, ($p < .05$).

This means that the number of dailies and weeklies falling into at least some cost levels was significantly greater than expected. Table XII shows the number of papers in each of nine cost levels.

The difference between the observed and expected number of papers point to significant relationships. For example, in the \$10-to-\$20 per-page categories, daily newspapers seem to fare better than weeklies. Dailies showed 16.53 more papers than expected, while weeklies fell short by approximately eight papers. However, in the lowest cost category, the number of weeklies was more than expected, while the number of dailies was less (4.47 in both cases).

TABLE XII
 RELATIVE PER-PAGE COMPOSITION COSTS OF OBSERVED AND
 EXPECTED NUMBER OF WEEKLY AND DAILY NEWSPAPERS

Composition Costs		Type of Newspaper		Totals
		Weekly	Daily	
\$80.01-100	O	3.00	1.00	4.00
	E	3.00	1.00	
	D	0.00	0.00	
\$70.01- 80	O	3.00	1.00	4.00
	E	3.00	1.00	
	D	0.00	0.00	
\$60.01- 70	O	4.00	0.00	4.00
	E	3.00	1.00	
	D	1.00	- 1.00	
\$50.01- 60	O	6.00	2.00	8.00
	E	6.01	1.99	
	D	- .01	- .01	
\$40.01- 50	O	15.00	1.00	16.00
	E	12.01	3.98	
	D	2.99	- 2.98	
\$30.01- 40	O	20.00	7.00	27.00
	E	20.28	6.71	
	D	- .29	.29	
\$20.01- 30	O	54.00	18.00	72.00
	E	54.08	17.91	
	D	- .08	.09	
\$10.01- 20	O	34.00	22.00	56.00
	E	42.06	5.47	
	D	- 8.06	16.53	
\$00.00- 10	O	24.00	2.00	26.00
	E	19.53	6.47	
	D	4.47	- 4.47	
Totals		163.00	54.00	217.00

O Observed frequencies

E Expected frequencies

D Difference between observed and expected frequencies

chi-square = 14.63 p.< .05.

In the higher cost level (\$40 to \$50), weeklies recorded three more papers than expected, while dailies logged three less. In cost levels from \$20 to \$40 and \$50 to \$100, relative numbers of weeklies and dailies were about as expected.

A comparison of the three types of newspaper composition by per-page composition costs produced a chi-square of 31.67 (df=16, $p < .01$). See Appendix H.

This means that the number of pages in the three types of papers, falling into at least some cost levels, was significantly greater than expected. Table XIII shows the number of papers in each of nine cost levels.

In paper-owned plants the expected and observed number of papers were very close for all nine cost levels. However, some significant relationships can be seen in those papers which do not own their own plants and those papers doing only their own composition. For example, in the two lower-cost levels (\$0 to \$10 and \$10 to \$20) papers doing only their own composition showed more papers than expected (5.77 and 10.13 respectively), and papers not owning their own plants showed fewer papers than expected (-4.7 and -9.81 respectively).

In the next three cost levels (\$20 to \$30, \$30 to \$40 and \$40 to \$50) this pattern is reversed. Papers doing only their own composition show fewer papers than expected (-4.55, -5.58 and -3.68) and papers not owning their own plants recorded more papers than expected (3.53, 3.70 and 4.34).

In the four higher cost levels (\$50 to \$60, \$60 to \$70, \$70 to \$80 and \$80 to \$100) the observed number of papers was about as expected.

Table XIV shows the mean per-page cost of tabloids was \$28.40,

TABLE XIII

RELATIVE PER-PAGE COMPOSITION COSTS OF OBSERVED AND EXPECTED
NUMBER OF PAPER-OWNED, NON-PAPER-OWNED PLANTS, AND PAPERS
DOING OWN COMPOSITION

Composition Costs	Type of Newspaper			Totals	
	Paper- Owned	Non-Paper- Owned	Composition Only		
\$80.01-100	O	0.000	3.000	1.000	4.00
	E	0.165	2.410	1.420	
	D	-0.165	0.590	- 0.420	
\$70.01- 80	O	0.000	4.000	0.000	4.00
	E	0.165	2.410	1.420	
	D	-0.165	1.590	- 1.420	
\$60.01- 70	O	0.000	3.000	1.000	4.00
	E	0.165	2.410	1.420	
	D	-0.165	0.590	- 0.420	
\$50.01- 60	O	0.000	5.000	3.000	8.00
	E	0.332	4.830	2.840	
	D	-0.332	0.170	- 0.160	
\$40.01- 50	O	0.000	14.000	2.000	16.00
	E	0.664	9.660	5.680	
	D	-0.664	4.340	- 3.680	
\$30.01- 40	O	3.000	20.000	4.000	27.00
	E	1.120	16.300	9.580	
	D	1.880	3.700	- 5.580	
\$20.01- 30	O	4.000	47.000	21.000	72.00
	E	2.990	43.470	25.550	
	D	1.010	3.530	- 4.550	
\$10.01- 20	O	2.000	24.000	30.000	56.00
	E	2.323	33.810	19.870	
	D	-0.323	- 9.810	10.130	
\$00.00- 10	O	0.000	11.000	15.000	26.00
	E	1.080	15.700	9.230	
	D	-1.080	- 4.700	5.770	
Totals		9.000	131.000	77.000	217.00

chi-square = 31.67 p.< .01.

compared to \$32.85 for standards. The standard error of the two types of format also indicated a much wider range of page costs between the two. Though the tendency was for standard formats to cost more than tabloids per-page, the difference of \$4.45 did not exceed chance ($t=1.23$, $df=215$, $p > .20$).

TABLE XIV
AVERAGE COMPOSITION COST OF TABLOIDS
AND STANDARDS PER-PAGE

	Count	Mean	Standard Deviation	Standard Error	t	p
Tabloid	175	28.40	21.22	1.60	1.23	.20
Standard	<u>42</u>	32.85	20.94	3.23		
Total	217					

Analysis of variance showed no significant difference in per-page costs of tabloids and standards.

One hypothesis of the study was confirmed with an analysis of variance. Composition costs of paper-owned printing plants was significant at the .01 level. An F-ratio of 4.01 means that differences as large as those observed among the means probably would occur by chance or random fluctuation less than one time in 100. However, the F-ratio only tells that, for sure, the significant difference exists between the highest mean of \$32.48 (off-campus commercial plants) and

the lowest mean of \$24.02 (student-newspaper-owned plants).

Schools with student-newspaper-owned facilities were able to keep page costs much lower than school-owned and off-campus commercial plants (\$19.48 to \$28.56) with a 95 percent confidence interval for the means, (Table XV). The Table shows that only the off-campus commercial and the student-newspaper-owned plants show overlap of costs per-page with the confidence interval. Compared to colleges with student-newspaper-owned equipment, it was safe to say that it was more expensive to have the paper composed at school-owned or off-campus commercial plants. Papers which had composition at school-owned or off-campus commercial plants had a confidence interval for the means much higher (\$28.69 to \$36.27) than student-newspaper-owned plants.

TABLE XV

AVERAGE PER-PAGE COMPOSITION COSTS OF STUDENT-NEWSPAPER-OWNED,
SCHOOL-OWNED AND OFF-CAMPUS COMMERCIAL PLANTS

	Count	Mean	Standard Deviation	Standard Error	95 Pct	Conf	Int for Mean
School-owned	10	27.22	8.49	2.83	21.56	to	33.75
Off-campus- commercial	130	32.48	21.92	1.91	28.66	to	36.30
Student-newspaper owned	<u>77</u>	24.02	20.01	2.28	19.46	to	28.59
Total	217						

Table XVI shows the difference of composition costs per-page between school-owned and off-campus commercial newspapers, between off-campus and student-newspaper-owned and between student-newspaper-owned and school-owned newspapers. A t-test yielded a significant difference between student-newspaper-owned and off-campus commercial printing plants ($t = 2.84$ $p < .01$).

Analysis of variance computed on per-page composition costs of papers printed by school-owned printing plants and by off-campus commercial plants was not significant.

TABLE XVI
DIFFERENCE OF COMPOSITION COSTS OF SCHOOL-OWNED,
STUDENT-NEWSPAPER-OWNED AND OFF-CAMPUS
COMMERCIAL PLANTS

Groups	Actual Differences	t	p
School-owned - Off-campus commercial	5.26	1.54	N.S.
School-owned - Student-newspaper-owned	3.20	.88	N.S.
Student-newspaper-owned - Off-campus commercial	8.46	2.84	<.01

Question 7: Printing Costs (per 1,000 four pages).

All respondents were asked to compute composition costs based on costs per 1,000 per four pages. This provided a base cost for the least number of pages printed per issue. All responses were from schools with a minimum 1,000 copies. Most schools added the cost for

each additional 1,000, even though not requested. Appendix I shows how schools were ranked.

The mean cost per 1,000 per four pages was \$54.46. The mode was \$50.00 with a median of \$43.00. With a standard error of the mean of 2.42, it can be estimated that the true mean cost in the population of like newspapers ranges from \$49.62 to \$59.30, at 95 percent level of confidence.

A comparison of the three types of newspaper composition by printing costs per 1,000 per four pages produced a chi-square of 35.71 (df-14, $p < .001$). See Appendix J. This means that the number of papers in the three types, falling into at least some cost levels, was significantly greater than expected. Table XVII shows the number of papers in each of eight cost levels.

In paper-owned plants, the expected and observed number of papers were very close for all eight cost levels. However, some significant relationships can be seen in those papers which do not own their own plants and those papers doing only their own composition.

In the lowest cost level (\$0 to \$20) papers doing only their own composition logged approximately five more papers than expected while papers not owning their own plants showed 3.90 less. Also, in the \$80 to \$100 cost level, composition only papers showed 2.32 more papers than expected while in the \$60 to \$80 cost level papers not owning their own plants showed 2.09 less.

In the \$40 to \$60 cost level, papers not owning their own plants showed 4.82 more papers than expected while 4.74 fewer papers were recorded for composition only papers. In the highest cost level (\$140 to \$180) papers not owning their own plants showed 2.55 more

TABLE XVII

RELATIVE COST PER 1,000 PER FOUR PAGES PRINTING COSTS OBSERVED
AND EXPECTED NUMBER OF PAPER-OWNED, NON-PAPER-OWNED
PLANTS AND PAPERS DOING OWN COMPOSITION

Printing Costs	<u>Type of Newspaper</u>			Totals	
	Paper- Owned	Non-paper Owned	Composition Only		
\$140.01-180	O	0.00	11.00	3.00	14
	E	0.58	8.45	4.97	
	D	-0.58	2.55	-1.97	
\$120.01-140	O	1.00	0.00	0.00	1
	E	0.04	0.60	0.36	
	D	-0.96	0.60	-0.36	
\$100.01-120	O	0.00	4.00	2.00	6
	E	0.25	3.62	2.13	
	D	-0.25	0.38	-0.13	
\$ 80.01-100	O	0.00	8.00	8.00	16
	E	0.64	9.66	5.62	
	D	-0.64	-1.66	2.32	
\$ 60.01- 80	O	2.00	13.00	10.00	25
	E	1.04	15.09	8.87	
	D	0.96	-2.09	1.13	
\$ 40.01- 60	O	2.00	35.00	13.00	50
	E	2.07	30.18	17.74	
	D	-0.07	4.82	-4.74	
\$ 20.01- 40	O	4.00	47.00	26.00	77
	E	3.19	46.48	27.32	
	D	0.81	0.52	1.32	
\$ 00.00- 20	O	0.00	13.00	15.00	28
	E	1.61	16.90	9.94	
	D	1.61	3.90	5.06	
Totals		9.00	131.00	77.00	217.00

chi-square = 35.71 p.< .001.

papers than expected and composition only recorded 1.97 less.

The observed number of papers were about as expected in all other categories.

Variance analysis showed no significant difference between mean printing costs per 1,000 copies per four pages of tabloids or standards ($t = -.35$, $df = 215$, $p > .76$). Comparative costs are shown in Table XVIII.

TABLE XVIII
AVERAGE COST OF TABLOIDS AND STANDARDS
PER 1,000 COPIES PER FOUR PAGES

	Count	Mean	Standard Deviation	Standard Error	t	Prob
Tabloids	175	54.82	37.33	2.82	.35	>.76
Standard	<u>42</u>	<u>52.97</u>	28.13	4.34		
Total	217	1.85				

Table XIX shows the mean per-page cost of tabloids was \$54.82, compared to \$52.97 for standards. The standard error of the two types of format indicated a much wider range of printing costs between the two. Though the tendency was for tabloid formats to cost more than standards per 1,000 copies per four pages, the difference of \$1.85 did not exceed chance.

Commercial printing plants accounted for the printing of 190 of the 217 newspapers. Only 16 papers were printed in school-owned print

shops while 11 were printed by paper-owned equipment (Table XIX). School owned plants averaged \$56.68 per four pages per 1,000 copies while commercial plants and paper-owned plants averaged \$54.90 and \$43.72, respectively.

TABLE XIX
AVERAGE PRINTING COSTS OF STUDENT-NEWSPAPER-OWNED,
SCHOOL-OWNED AND OFF-CAMPUS COMMERCIAL PLANTS

	Count	Mean	Standard Deviation	Standard Error
School-owned	16	\$56.68	34.83	8.70
Off-campus commercial	190	54.90	36.49	2.64
Student-newspaper-owned	11	43.72	19.51	5.88

Analysis of variance was computed among the three possible printing locations and no significance was found. Post-hoc t-tests for differences between the means also yielded no significant difference (Table XX).

A comparison of daily and weekly newspapers by printing costs per 1,000 per four pages produced a chi-square of 9.26 (df=7, $p < .23$). This means that the number of dailies and weeklies falling into at least some cost levels was not significantly greater than expected.

Question 8: What is the total investment in composition equipment to plate preparation?

TABLE XX

POST-HOC T-TEST FOR PRINTING COSTS FOR COST
1,000 PER FOUR PAGES OF SCHOOL-OWNED
CAMPUS-COMMERCIAL PLANTS

Groups	Actual Difference	t	p
School-owned - Off-campus commercial	1.78	.20	N.S.
School-owned - Student-newspaper-owned	12.96	1.23	N.S.
Student-newspaper-owned - Off-campus commercial	11.18	1.73	N.S.

Only 75 of 217 schools reported some investment in composition equipment. The remaining 142 schools reported other means of page composition. The mean of the 75 schools was \$34,331 while the mode was \$40,000 and the median was \$24,980. Maximum equipment investment was \$125,000. Two schools reported investments of only \$1,000. See Appendix K.

Question 9: Please list what the composition equipment includes.

Compugraphic Corporation was most used in the 75 newspapers reporting investments. Compugraphic was the main phototypesetting machine in 60 schools. International Business Machines was used in 10 schools. Addressograph Multigraph was used in three schools, while Alphatype and Mico-Tex had one each.

Most schools reported using one input device for typesetting and one input device for headlines and advertising. Weekly newspapers had a Compugraphic I or Compugraphic II, Jr., plus a Compugraphic 7200. The Compugraphic 7200 was reported being used in 52 of the 75 schools.

Weeklies also used the IBM Electronic Selectric Composer for typesetting with Compugraphics 7200 for headlines and ads. Daily newspapers had more than one typesetting input machine. This included Compugraphics I, Compugraphic II, Jr., and/or a Compugraphic IV. Dailies used from two to six IBM Selectric Composers. Four dailies which reported an investment of more than \$100,000 used Compugraphics Unified Composer Unisetter. No schools reported using a front-end system (video display terminals) in the newsroom which meant that all editorial copy had to be reset in typesetting after being typewritten.

In addition to typesetting equipment, all schools listed miscellaneous equipment such as waxers, Kodak's stabilization processors, paste-up tables and extra fonts.

Question 10: What is the total investment in printing equipment from the plate preparation.

Only 10 schools (See Table XXI) reported a printing equipment investment. Seven of the 10 schools were daily newspapers. Eight of the 10 schools were tabloid size.

The total investment for printing equipment ranged from \$16,000 for a A. B. Dick offset sheet-fed press to a \$201,000 30-inch six unit Goss web press.

Goss presses were used by five of the 10 schools. Four Goss presses were two unit presses. Three schools reported using three unit News King Web presses while one school used a two unit Webendorfer web offset press.

Comparisons of school-owned printing equipment to the composition costs per-page and the printing costs per 1,000 copies per four pages showed that the higher the composition equipment investment, the more

the schools paid for composition costs per page. Also, schools paid more in printing costs per 1,000 copies per four pages as the investment of the printing equipment increased (Table XXII).

TABLE XXI
PRINTING INVESTMENT OF COLLEGES REPORTING
STUDENT-NEWSPAPER-OWNED EQUIPMENT

Cost	F	Frequency	Size
\$ 16,000	1	weekly	tabloid
30,000	1	weekly	tabloid
35,000	1	daily	tabloid
33,000	1	daily	tabloid
34,810	1	daily	tabloid
46,141	1	daily	tabloid
70,000	1	daily	tabloid
75,000	1	daily	tabloid
100,000	1	daily	standard
201,000	<u>1</u>	daily	standard
Total	10		

It should be noted here that the two weekly newspapers were using sheet-fed presses for printing and that the two largest presses were printing standard newspapers.

Question 11. Please explain the number of full-time employees needed to work in the composition and/or printing departments of the campus paper.

Data from this question were difficult to synthesize because of

variety of responses given by the 75 schools. However, most weekly newspapers reported that students did all the typesetting and paste-up. Only four weekly papers had a full-time person on typesetting and paste-up. Most weekly newspaper advisers said they were able to keep composition costs down by paying students minimum wages.

TABLE XXII

TOTAL EQUIPMENT COST COMPARISONS OF STUDENT-NEWSPAPER-OWNED COMPOSITION, AND PRINTING PLANTS

Composition Equipment Investment	Composition Costs Per Page	Printing Equipment Investment	Printing Cost Per 1,000 Copies Per Four Pages
\$ 6,000	\$ 0	\$ 16,000	\$11
8,500	6	30,000	16
40,000	12	30,000	35
70,000	17	33,000	40
75,000	25	34,810	40
91,163	30	46,141	50
100,000	30	70,000	55
105,000	33	75,000	66
109,157	35	100,000	68
120,000	78	201,000	78

Daily newspapers usually averaged one full-time composition supervisor. Smaller dailies had students in typesetting and paste-up positions, while larger dailies with standard format reported two full-time typesetters and two full-time people on paste-up.

Daily newspapers with printing presses had an additional two

full-time printers to operate press equipment. One small tabloid used students to operate an A. B. Dick offset press. The paper reported no cost per 1,000 per four pages.

In general, advisers said their costs were minimal due to student volunteers, work-study students or minimum wages for students.

Question 12: Has the school ever considered changing the present composition and/or printing arrangements?

A general answer to this question was a simple "no." Advisers said the main problem was "obtaining funds to prove that the paper could operate more economically and in less time." Weekly newspaper advisers faced the problem of obtaining funds. "We are unable to justify expenses for small publication operations," said one adviser. "Our administration fears the student press and won't spend any money," said another.

Several state legislatures also prohibit phototypesetting equipment purchases. "We are restricted by state law . . . we must be able to justify it for instructional purposes or we're told to forget it," wrote one adviser. Another said his state would not let the newspaper keep a reserve for new equipment. The newspaper was in good shape, however, as the composition cost was \$9.00 per page - well below the reported average. Another adviser wanted to make changes, but funding was not available. A commercial printer was doing his composition for \$55 per page.

Some advisers were happy with present arrangements. "We did some superficial investigation and found the change to on-campus production would be extremely costly," one adviser said. His newspaper was composed for \$25.00 per page and his cost per 1,000 copies was \$42.00.

Another adviser said, "We have considered doing our own typesetting and paste-up but we decided against it." The paper cost \$24.00 per page and \$34.00 per 1,000 copies.

One campus newspaper, composed by an off-campus commercial plant at \$12.50 per page, planned to go to the university print shop composition.

Most remarks made by the advisers were success stories related to composing by paper-owned equipment.

One adviser said, "We were paying \$31.25 per page at the school's print shop. We bought a Compugraphic II, Jr., a Compugraphic 7200, a waxer, processor and hired a full-time person. We reduced our cost to \$12 per page on composition - and \$2.00 of that was depreciation on the machines. The equipment paid for itself in one semester."

Another adviser noted, "Phototypesetting allowed 35 to 40 percent reduction in budget. Two-thirds of the equipment was amortized in two years." A weekly adviser said, "The present system of in-house typesetting provides better control and cost savings over commercial composition. We use the IBM-MTST Composer and we can do a page for \$8.75."

"How can you argue with a 50 percent savings in production time? We reduced our time from about three hours per page by half. This helped get the paper out sooner, with fewer headaches and using fewer people," one adviser said.

The University of Hawaii got possession of equipment discarded by several large Honolulu printing houses and we were able to give the former owners a tax write-off." The adviser said:

Our page costs (approx. \$80 per, 8-pp., 15000 copies thrice weekly) are high by Mainland standards, but low by local

standards where printing tends to run close to 40% higher than West Coast commercial rates. No Honolulu commercial shop can produce what we do on campus, much less match our costs.

Many advisers reported an ongoing plan to keep equipment operable and up-to-date. Larger dailies seemed to be looking at VDT and front-end systems. Several noted funding and funds were available up to \$100,000. Some were considering presses.

Most advisers, however, were interested in keeping costs as low as possible. One adviser wanted help on the contract he had with his printer. See Appendix L. The contract allowed students the use of equipment and facilities on certain days. The adviser's concern was that composition cost per-page was too high at \$77.50. And, cost per 1,000 copies was contracted at \$115.51.

Finally, one adviser submitted his daily record sheet to show how he kept a running total of costs. See Appendix M. All items were calculated daily for management to "watch trends and to maintain some financial control over areas which reported significant daily increases."

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was carried out because the researcher had noted a lack of useful information on composition and printing costs of college newspapers. Management procedures were examined, as well as costs of newspapers which were composed and printed by (1) school-owned facilities, (2) student-newspaper-owned facilities or (3) off-campus commercial facilities.

Newspaper advisers from 217 colleges and universities responded to the mail survey used to assemble data. They were asked to report composition costs on a per-page basis and printing costs on the basis of cost per 1,000 copies per four pages. In addition, they were asked to report costs of total investment in composition and printing equipment.

The independent variables included the frequency of the publication (daily or weekly), the size of the publication (tabloid or standard), and the origination of composition and printing as to production facilities (school-owned, student-newspaper-owned or off-campus commercial).

There were two dependent variables, composition and printing. The composition costs reported by the schools on a per-page basis was one dependent variable; the second was printing costs reported on the basis of cost per 1,000 copies per four pages.

Advisers were asked to compute costs for composition and printing. They also were asked to report the costs of composition and printing equipment if the newspaper owned the equipment. The advisers were asked to indicate the problems relating to costs, equipment purchasing and the manpower needed to operate the equipment. It was anticipated that such data would provide the most economical way of publishing the campus newspaper.

Summary

The first objective of this study was to determine the various arrangements by which student newspapers are composed and printed. This information was divided into three areas, as indicated on page 37. Identifying the composition and printing arrangements helped explain the variation in costs reported.

Composition and printing costs were subjected to rigorous statistical analysis.

Newspapers with student-newspaper-owned composition equipment were asked for data on the equipment investments made by the paper. Respondents gave a description of what such capital equipment included. Seventy-seven schools reported student-newspaper-owned composition equipment.

On the other hand, only 10 schools reported purchase of a printing press. The remaining newspapers were printed either by school-owned facilities or by off-campus commercial shops. The 217 newspaper advisers were asked to report the number of full-time employees in their composition and/or printing departments. Finally, respondents were asked if considerations were being given to any change in their

present composition and/or printing arrangements.

The hypotheses in the study were the following:

Hypothesis No. 1. College newspapers using student-newspaper-owned composition equipment will operate with lower per-page composition costs than college newspapers using school-owned or off-campus commercial composition equipment. This hypothesis was supported. Table XV, page 48, shows that per-page costs were lower significant at the .01 level for student-newspaper-owned printing plants. Data for school-owned printing plants and off-campus commercial plants showed no significant difference.

Hypothesis No. 2. College newspapers using student-newspaper-owned printing equipment will operate with lower cost per 1,000 copies per four pages than college newspapers using school-owned or off-campus, commercial printing equipment. This hypothesis was not supported. Analysis of variance indicated no significant difference among the three printing arrangements studied.

Conclusions

Several conclusions may be reached regarding the data generated by this research:

1. More than 60 percent of the college newspapers responding to this survey do not own composition equipment. Very few schools use school-owned equipment (4.1 percent) while 35.5 percent of the schools surveyed use student-newspaper-owned composition facilities.

The data suggests that colleges may need to give more attention to current cost trends and the feasibility of adding electronic composing equipment.

2. In the printing area, colleges are not equipped to publish by school-owned equipment or student-newspaper-owned equipment. This suggests a careful study by advisers of the relative strengths and weaknesses of commercial shops within a reasonable distance of the campus.

3. Schools with student-newspaper-owned facilities were able to keep page costs much lower than schools which had composition done elsewhere.

4. The composition costs per page vary significantly among the 217 schools. The mean cost per page was \$29.26. It would seem that schools with higher costs than the confidence interval allowed would need to examine their costs per page.

5. Of the 10 student newspapers which reported owning both composition and printing equipment, it should be noted that the higher the investment in this equipment the more the schools paid for composition and printing. This was true both with regard to cost per page and cost per 1,000 copies per four pages. Advisers should be cautious not to use these data as a basis for rejecting modern electronic composing equipment.

6. Advisers attributed lower costs for composition with student-newspaper-owned equipment to student employment. This may be the key to lower composition costs. Otherwise the highly paid commercial typesetters must be absorbed in the total cost of the composition job, and the customer is the one who will pay the salaries. However, the effect of electronic composing components on costs must not be overlooked.

7. An examination of cost data throughout the response suggests

the difficulty of prescribing a single "ideal" plan for a student newspaper to follow.

Recommendations

The results of this study tend to indicate that college newspaper advisers are not aware of or not sufficiently concerned with, composition and printing costs. Because the costs of publishing campus newspapers vary to such a degree, advisers should seek to know how their newspapers compare with other papers cost-analysis basis. Advisers apparently want to know how their student newspapers rank in editorial contests. A likely part of entering contests might be a fact sheet which would explain the business aspects of the paper.

Based upon the research involved in this investigation, the author offers these recommendations:

Recommendation 1: College newspaper advisers should compare costs through an annual data report similar to that of the Western Association of University Publications Managers. The WAUPM report is the best model available since it goes beyond merely reporting costs. It includes some of the "other" costs that advisers need to know. Some of these "other" costs could be made available by individual schools which report such things as cost of new equipment, depreciation, salaries for composition supervisors, typists, paste-up personnel and even supply costs.

Recommendation 2: The National Council of College Publications Advisers should be the group which reports these costs regionally and/or nationally. The NCCPA, which is divided into 11 regions, should be the leader in organizing this effort to cost studies in college newspaper composition and printing. Even if the NCCPA does not require such a

cost study, it should encourage its various regions to conduct investigations dealing with costs.

The NCCPA is long overdue in a cost study. With the advent of phototypesetting equipment, there is a real need for colleges to compare equipment, resources, salaries and other related areas. Yearly regional conferences, like the annual WAUPM meeting would be a way to generate interest in costs. Also, by having regional meetings, the conference table would not be too crowded for member schools to entertain ideas and questions. Perhaps a limit of 25 interested schools, as in WAUPM, would make membership in such a regional group more meaningful. WAUPM encourages members to be active; a two-year absence from meetings and failure to report yearly costs both are grounds for dismissal.

Recommendation 3: Along with reporting costs to members, the NCCPA could provide leadership for the entire printing industry by providing standard terminology and precise definitions relevant to cost accounting in the industry. (One example worth noting in Figure 1 is the term "prime cost." To one person reporting costs, the term prime cost may include material costs, factory payroll, fixed factory expenses and variable factory expenses. To another person reporting, the prime cost may mean material cost and production labor and fringes.) The area of cost accounting and reporting would be clearer if one college knew what costs were included in each of the categories. In addition, it would make studies more accurate if one college newspaper knew that per-page composition costs were inflated at "School A" because students were being paid, as opposed to "School B" where students contributed time without pay.

Standardization of terms and concepts is critical, and the college press could lead the way.

Recommendation 4: If the terms were properly defined, college newspapers would be able to compare composition and printing costs within student-newspaper-owned plants, school-owned plants and commercial plants with relatively little effort and with greater precision. At present, there are too many unaccounted costs which make variable-related studies questionable. Other studies of composition and printing costs should be carried out periodically.

Recommendation 5: Further study should be made of composition and printing equipment costs, comparing the educational benefits gained. Similar to the Steng research, such a study could correlate cost of equipment investment to the educational needs of students in journalism programs. It would be interesting to know if students with little or no access to computerized phototypesetting or printing are at a disadvantage at graduation over students with some or much access to this equipment.

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APPENDIXES

APPENDIX A

DATA ON PHOTOTYPESETTING MACHINES PROPOSED

TO DAILY O'COLLEGIAN PUBLISHING BOARD

COMPANY AND MODEL	Number of Sizes	Number of Pages	Lines per Minute	(an Intermix	Exception Word Dictionary	Can go On-Line	Image Master	Characters per Page	Maximum Line Length	Tabulation	Secondary Leading	Kerning Ability	Programmable	Core Size	Format Storage	Base Price	Software Cost	Training	Warranty (Labor, Parts)
Addressograph-Multigraph 748	4	4	50	Y	Y	Y	Disc	112	54	Y	Y	Tape	Y	16k	Y	\$21,730		Incl.	90 days
Compugraphic Unisetter	12	8	80	Y	N	Y	Film Strip	118	45	Y	Y	Tape	N		Y	15,950		Incl.	96 days
Dymo Presetter	8	8	50	Y	N	Y	Disc	112	54	Y	Y	Tape	Y	16k	Y	26,000	9,300	Incl.	90 days
Merrillbaird VIP	21	4	80	Y	Y	Y	Grid	96	45	Y	Y	Tape	Y	16k	Y	32,500	25,000	Extra	96 days

APPENDIX B

PROPOSAL TO THE UNIVERSITY OF ILLINOIS

BOARD OF STUDENT PUBLICATIONS

	MYCROTEK	N.E.C.	COMPUTYPE	COMPUGRAPHIC	AKI	ROCKWELL(MGD)
System Name	Myco-comp-1000	News	Microstor	Unifled terminal (UTS)	Maxis	Edit-text Microedit
Cost 8 VDT Cost 16 VDT	\$80,000.00 \$108,700.00	\$81,600.00 \$116,600.00	\$64,000.00 \$110,000.00	\$72,500.00 \$102,500.00	\$91,900.00 \$123,100.00	\$108,000.00 \$137,000.00
System Type Back-up	Intel VDT's (distrib) Complete 8 VDT's	Intel VDT's (Distrib) Complete 8 VDT's	Intel VDT's (distrib) Complete 8 VDT's	CPU (Interactive) Complete 8 VDT's	CPU (Interactive) Complete 8 VDT's	Intel VDT's (Distrib) - CPU (control) Complete for 8 VDT's
Configuration	2 controllers 3 dual disc drives	2 Controllers 2 Dual disc drives	2 Combined, dual Dens disc./control	2 CPU's 4 Discs-CPU	2 CPU's 4 Discs-CPU	1 cpu 1 rigid disc 4 floppy discs
Disk Design	Dual Density Floppy (2/unit)	Single density Floppy (2/unit)	Dual Density Floppy (1/unit)	Single density Floppy (4-unit)	Dual density Floppy (4-unit)	Rigid disc (10 MB) Floppy(4-unit)
VDT Design	15 in. 24 pt 10 x 13 Tilt; Def. KB; Files	12 in. 18 pt 7 x 8 Def. KB.	9 in. 14 pt 7 x 9 Green; small	12 in. 20pt 7 x 9 Def KB; Rev. Vid.; Hen	15 in. 16pt Large	16pt 7 x 9 Small; green
Control Design	Microprocessor (chip) 'Intel 8080'	Microprocessor (Chip) 'Intel 8080'	Microprocessor (chip) 'Intel Z80'	Minicomputer DEC PDP11-	Minicomputer	Minicomputer 'Nova 3-D' Data Gen.
Service	Good; Few instal's Internal Diagnostics' cards	O.K. Serv. cent. in Ill.	Good; phone 24 hrs Internal diag. 14 centers	Very good; phone Internal disc diag Large service dept.	Phone; good Chicago Serv.	Good; phone
Co Depend. & HO Reputation Base	Good; Kansas system engineers	Good; Mo. (dealers) Systems (simple)	Good; Florida Low cost input	Excellent, Mass. Low cost type, etc	Good; Wash. Keyboards;	Good; Chicago Typesetters;
Co. Affiliation	AIH. Kreonite Graphics equipment.	Independent Just purchased?	Div of Harris (Harris Comm. Large)	Independent	Independent	Div. of Rockwell International
VDT Storage Scrollable	6K scroll in VDT 2K Format in VDT	4K scroll VDT minimal format	4K Scroll VDT Minimal format	'Virtual'(16,000) 500 char. format	Virtual	8K
Fixed Storage	N-A	N-A	N-A	32K Core-CPU		64K CPU
Removable Sys. Store	3.4MB 6 Floppy discs	1 MB 4 Floppy discs	1.2 MB 2 Floppy discs	2 MB 8 Floppy discs	4.8 MB 8 Floppy discs	10 MB Rigid disc
Expansion	Program updates H&J Remote; rigid disc	Limited Dual Density discs	All areas thru Harris	no expansion or development Rigid Disc-Other Prod.	H&J; dict.; ad comp. mark & display. Pagination	Add on VDT's Remote Ed. VDT with floppy
Other Products	Clc. Program Word Process print	None	Full line thru Harris	Full Range Display VDT's Typesetters etc.	Other VDT's As above	W.P.; Typesetters Rockwell products
Editing Features	excellent Head and copy III Slow cursor!	Simple	Simple & limited Code strings long	Excellent (Hendrix) Limited files (450)	Good Codes complex	Good Simple commands Code conversion
Wire Features	Echo Weak file struct.	Simple Weak file struct.	Simple	Good directories And status info 4 Low speed	2 Low speed	Good directories weak file structure

APPENDIX C

WESTERN ASSOCIATION OF UNIVERSITY

PUBLICATIONS MANAGERS 1977

DATA PACKAGE

Western Association of University Publications Managers
1978 Conference - Carmel, California

NEWSPAPERS - Local Rates (minimum contract)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Oregon State	98	1 19	1 40	1 40	1 40	1 40	1 54	1 65	1 75	1 85	1 95	
Arizona State					1 30	1 50	1 50	1 70	1 70	1 90	2 05	
New Mexico			1 25	1 25	1 50	1 50	1 55	1 85	2 10	2 20	2 30	
Hawaii								3 36	3 36	3 36	3 36	
Idaho	1 00	1 25	1 25	1 25	1 25	1 60	1 45	1 45	1 60	1 45	1 78	
UC Santa Barbara	1 20	1 30	1 30	1 40	1 40	1 43	1 65	1 80	2 00	2 25	2 55	
CSU Northridge	1 70	1 70	1 70	1 70	1 70	2 00	2 00	2 05	2 26	2 26	2 26	
Oregon			1 60	1 50	1 50	1 50	1 60	2 35	2 35	2 35	2 10	
Washington State	1 01	1 11	1 21	1 36	1 48*	1 58*	1 68*	1 88*	2 08*	2 28*	2 38*	
Washington	1 95	2 05	2 10	2 10	2 25	2 35	2 40	2 60	3 15	3 15		
UCLA	1 75	1 70	1 95	1 95	1 95	2 00	2 25			2 75	2 45	
So California				2 00	2 00	2 00	2 25	1 80	2 10	2 10	2 30	
Arizona	1 75	1 75	1 75	1 75	1 80	1 80	1 80	2 00	2 30	2 40	2 40	
CSU Los Angeles	1 44	1 40	1 40	1 50	1 50	1 60	1 60	1 70	1 70	1 90	1 90	
Houston	1 40	1 47	1 47	1 60	1 60	1 60	1 60	1 60	1 68	1 82	1 96	
So Methodist								1 75	1 68	1 68	1 82	
Illinois								2 00	2 30	2 65	2 90	
Oklahoma				94	94	94	94	1 19	1 29	1 43	1 53	
Texas	1 05	1 05	1 23	1 47	1 47	1 62	1 78	1 96	2 15	2 29	2 29	
Indiana			1 30	1 44	1 60	1 70	1 98	2 10	2 14			
Texas Tech			1 05	1 05	1 25	1 25	1 35	1 50	1 75	1 95	1 95	
Michigan State		1 75	1 75	1 85			3 55	3 70	3 85	3 85	1 05	
Ohio State							2 65	2 75	2 85			

NEWSPAPERS - Local Rates (campus)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Oregon State	98	1 19	1 40	1 40	1 40	1 40	1 54	1 65	1 75	1 85	1 95	
Arizona State		1 50	1 50	1 50	1 50	1 50	1 50	1 70	1 70	1 90	2 05	
New Mexico			1 25	1 25	1 50	1 50	1 55	1 75	1 85	1 95	2 00	
Hawaii											5 04	
Idaho	1 00	1 50	1 50	1 50	1 60	1 60	1 75	1 75	1 90		2 08	
UC Santa Barbara	1 25	1 35	1 35	1 50	1 50	1 50	1 75	1 90	2 10	2 35	2 65	
CSU Northridge	1 70	1 70	1 70	1 70	1 70	2 00	2 00	2 05	2 26	2 26	2 26	
Oregon			1 60	1 50	1 50	1 50	1 50	2 00	2 00	2 10	2 10	
Washington State	1 25	1 35	1 45	1 60	1 70*	1 80*	1 90*	2 10*	2 30*	2 50*	2 70*	
Washington	1 50	1 60	1 65	1 65	1 75	1 85	1 95	2 15	2 50	2 50		
UCLA	1 75	1 55	1 70	1 95	1 95	2 00	2 00	2 25	2 25	2 30	2 50	
So California	1 75	1 60	1 70	1 75	1 75	1 75	2 00	2 00	2 25	2 25	2 25	
Arizona	2 00	2 00	2 00	2 00	2 25	2 25	2 25	2 25	2 45	2 60	2 60	
CSU Los Angeles		1 35	1 35	1 50	1 50	1 50	1 50	1 60	1 60	1 70	1 70	
Houston	1 55	2 10	2 10	2 30	2 80	2 80	2 66	2 66	2 66	2 80	3 08	
So Methodist								1 82	1 89	1 89	1 82	
Illinois												
Oklahoma												
Texas	1 20	1 20	1 41	1 47	1 47	1 62	1 78	1 96	2 16	2 29	2 29	
Indiana			1 96	2 24	2 80*	2 10	2 40	2 60	2 70			
Texas Tech					1 75	1 75	1 85	2 00	2 25	2 50	2 50	
Michigan State		2 75	2 75	3 00			3 00	3 25	3 25	3 25	3 35	
Ohio State							2 20	2 30	2 40			

* 5¢ discount for cash / # 25% discount for cash

Western Association of University Publications Managers
1978 Conference - Carmel, California

NEWSPAPERS - Classified Rates

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Oregon State	75	75	75	1 00	1 00	1 00	1 50	1 50	1 50	
Arizona State	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	
New Mexico	75*	75*	75*	90*	1 00*	1 00*	1 00*	1 00*	1 00*	
Hawaii										
Idaho	65	65	65	65	70	75	1 00	1 00	1 00	
UC Santa Barbara	50#	60#	60#	60#	70#	1 00*	1 00*	1 20*	1 35*	
CSU Northridge	4 00*	4 00*	3 00*	3 00*	3 00*	6 00*	4 00*	4 00*	5 60*	
Oregon	80	80	1 00	80	1 00	1 00	1 00	1 20	1 20	
Washington State	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	1 50	
Washington	1 00	1 00	1 00	1 20	1 35	1 50	1 50	1 50		
UCLA	1 50	1 50	1 50	1 50	1 50	1 50	1 75	1 75	1 85	
So California	1 35	1 35	1 35	1 35	1 35	1 35	1 50	1 50	1 75	
Arizona	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	
CSU Los Angeles	1 00	1 50	1 75	1 75	1 75	1 75	1 75	1 75	1 75	
Houston	1 00	1 50	1 50	1 50	1 50	1 50	1 50	1 80	2 10	
So Methodist						2 00	2 00	2 00	2 00	
Illinois						1 00	1 00	1 00	1 00	
Oklahoma				1 20	1 50	1 50	1 80	1 80	1 80	
Texas	1 50	1 05	1 05	1 05	1 50	1 65	1 80	1 95	1 95	
Indiana	1 30	1 50	1 50	1 50	1 75	1 75	1 75	1 75		
Texas Tech	1 50	1 50	1 65	1 65	1 65	1 50	1 50	1 50	1 50	
Michigan State	1 50	1 50			1 50	1 50	2 16	2 16	2 70	
Ohio State					3 50	4 00	4 00			

NEWSPAPERS - Subscription Rates

	1970	1971	1972	1973	1974	1975	1976	1977	1978	Issues 1977
Oregon State	8 00	8 00	10 00	10 00	10 00	10 00	10 00	10 00	10 00	139
Arizona State	5 00	6 00	6 00	7 50	7 50	10 00	10 00	10 00	10 00	111
New Mexico	7 00	7 00	7 00		10 00	10 00	10 00	10 00	10 00	114
Hawaii										75
Idaho	5 00	5 00	5 00	7 00	7 00	8 00	8 00	8 00	8 00	60
UC Santa Barbara	6 00	6 00	7 50	7 50	7 50	9 00	10 00	12 00	12 50y	142
CSU Northridge	7 00	7 00	7 00							111
Oregon	9 00	10 00	10 00		12 00	17 00	17 00	20 00	20 00	167
Washington State	6 00	7 00	8 00	10 00	10 00	12 00	14 00	14 00	15 00	125
Washington	7 00	7 00		10 50	10 50	13 50	15 50	16 50	16 50	118*
UCLA	10 00	10 00	12 50			15 00	18 00	18 00	18 00	132
So California	8 00	9 00	15 00	15 00	15 00	20 00	20 00	20 00	20 00	130
Arizona	8 00	8 00	8 00	8 00	8 00	8 00	8 00	12 00	12 00	145
CSU Los Angeles	6 00	8 00	12 00	12 00	12 00	12 00	12 00	12 00	12 00	133
Houston	6 00	12 00	12 00	12 00	12 00	12 00	12 00	12 00	12 00	126
So Methodist						15 00	20 00	20 00	20 00	126
Illinois						12 00	14 00	16 00	14 00	187
Oklahoma				10 00	10 00	10 00	10 00	15 00	15 00	205
Texas	9 50	10 00	10 00	13 00	14 00	15 00	17 00	21 00	24 00	150
Indiana	9 50	12 00	12 00	13 50	14 00	15 00	16 50	16 50		218*
Texas Tech	10 00	10 00	10 00	10 00	10 00	10 00	12 00	14 00	14 00y	163
Michigan State					15 00	15 00	18 00	18 00	18 00	176
Ohio State					12 00	13 50	13 50			

* Refer to survey / # two line rate / y annual rate

Western Association of University Publications Managers
1978 Conference - Carmel, California

NEWSPAPERS - National Advertising - Column Inches

	1969	1970	1971	1972	1973	1974	1975	1976	1977
Oregon State		10 837	6 336	4 524	4 982	5 307	4 123	3 600	7 895
Arizona State				5 562	5 312	4 375	3 692	5 963	13 048
New Mexico				3 185	3 724	4 084	3 031	3 316	6 565
Hawaii							1 836	2 376	2 075
Idaho	6 000	3 243	2 873	900	872	1 254	3 344	4 941	1 833
UC Santa Barbara	8 400	7 980	3 500	4 254	4 034	2 526	3 000	3 226	3 349
CSU Northridge	7 278	6 233	3 367	4 455	3 536	2 996	3 409	3 476	10 089
Oregon								2 231	7 520
Washington State	10 491	6 185	4 669	4 383	5 248	5 211	4 999	4 724	6 861
Washington	12 442	10 976	7 449	5 756	7 334	5 861	5 983	7 157	
UCLA	16 593	13 931	12 673	9 240	8 867				
So California	15 114	10 413	7 939	6 581	7 161	4 823	5 907	6 542	15 301
Arizona	12 689	10 890	7 431	5 589	5 579	4 752	4 155	3 882	6 709
CSU Los Angeles	10 350	7 462	5 344	5 368	5 499	3 463	3 858	6 915	9 632
Houston	10 533	8 652	6 195	4 869	4 561	4 168	4 794	7 948	12 550
So Methodist							2 163	2 288	6 925
Illinois							9 350	8 078	12 130
Oklahoma			5 089	4 138	3 686	2 931	3 213	19 194#	13 577
Texas	18 667	23 296	11 283	9 234	10 442	10 284	12 532	14 656	21 342
Indiana	10 654	11 547	10 943	9 141	6 990	6 401	5 108	5 776	
Texas Tech		8 583	5 579	3 683	4 435	5 509	5 578	5 581	12 428
Michigan State	16 615	16 397				5 050	6 202	7 705	13 387
Ohio State						17 248	16 758		

NEWSPAPERS - National Advertising - Gross Revenue

	1969	1970	1971	1972	1973	1974	1975	1976	1977
Oregon State	18 500	15 237	12 615	8 167	8 967	11 739	8 898	7 646	16 674
Arizona State	15 000	10 300	10 416	8 500	8 500	7 000*	7 500*	11 211*	15 636
New Mexico			7 325	5 000	5 847	6 741*	5 304*	7 921*	13 074*
Hawaii						2 493*	3 954*	5 621*	7 293*
Idaho		4 865	4 310	1 450	1 296	1 754*	6 491*	9 558*	2 489*
UC Santa Barbara	14 734	11 011	8 330	6 339	5 987*	3 612*	4 578*	5 643*	6 229*
CSU Northridge	25 284	14 565	14 802	13 295	11 736	8 988	10 473	11 490	23 181
Oregon			14 682	10 562	10 753		7 576*	3 344*	24 826
Washington State	20 548	14 080	11 101	12 140	14 834	15 729	16 583	15 090	24 440
Washington	34 982	39 584	31 138	16 543	21 270	19 758	20 429	31 482	
UCLA	46 305	43 016	40 932	35 983	31 034				48 819
So California	48 087	31 200	25 564	16 533	15 479*	10 411*	11 836*	11 173*	18 551*
Arizona	32 157	27 866	22 726	10 220*	10 474*	9 848*	9 739*	11 198*	18 629*
CSU Los Angeles	20 335	15 670	13 467	13 573	16 937	10 666	12 423	22 266	31 015
Houston	13 609	11 359	11 470	8 582	7 797	6 652*	7 503*	12 456*	20 869*
So Methodist							5 148	5 269	17 739
Illinois							36 537	33 928	51 425
Oklahoma			16 024	12 972	12 602	9 027	9 897	46 337#	41 872
Texas	43 716	55 369	34 805	28 965	32 700	36 029	52 299	69 134	107 162
Indiana	23 867	29 099	24 105	22 538	20 504	20 799	17 753	21 976	
Texas Tech		19 025	7 942	10 856	12 993	17 703	17 096	20 328	46 130
Michigan State	56 420	59 576				24 084	31 790	37 762	84 565
Ohio State						65 240	62 853		

Includes Regional / * Net revenue (.52475 of Gross Revenue)

Western Association of University
Publications Managers
1978 Conference..... CARMEL

THE DAILY ILLINI
TYPESETTING/PRODUCTION SURVEY
INSTITUTION University of Illinois

General Manager: Richard Sublette
Production Manager: Geoffrey Part

Manufacturer Model Number	Capital Equipment Description	Year ACQ	Purchase Price	Annual	
				Depreciatn	Lease Cost
	(2) Unisetter	8/76	\$35,350	\$ 8,838	\$
ACM 900	(1) Phototypesetter	5/74	20,938	5,237	
5200	(3) Editing terminal	6/74	32,480	8,120	
Compuwik	(2) Processor	6/74	1,342	336	
7200	(1) Display Machine	5/74	3,832	958	
3130	(1) OCR	5/74	21,564	5,391	
SST2024	(1) Process Camera	8/74	5,980	1,495	
	(1) Unified Composer	3/77	17,850	4,462	
Miscellaneous - Total All Other Capital Equipment			59,579	17,221	
TOTAL CAPITAL EQUIPMENT INVESTMENT			198,915	52,058	\$

JOB TYPE or TITLE	Pay Rate	Pay Period	Daily		Annual		Annual Pay -- S Pro-rated			
			AvgHrs	AvgPay	Hours	Pay	Types	PasteUp	Camera	Prints
Supervisor/Manager	(1) \$1,083				13,000	5,200	7,800			
Assistant Manager (3)	700				24,500	9,800	14,700			
Students-Part Time	\$3.00				44,610	17,844	22,306	4,460		
TOTAL					82,110	32,844	44,806	4,460		

OTHER EXPENSES:	Annual Cost	Prod Supplies Pro-rated			
		Types	PasteUp	Camera	Prints
Production Supplies	\$ 19,100	9,550	3,820	5,730	
Office Supplies		/	/	/	/
Telephone		/	/	/	/
Travel		/	/	/	/
Unemployment & Health Ins.	10,789	/	/	/	/
Payroll Benefits - FICA, Retirement		/	/	/	/

APPENDIX D

SURVEY COVER LETTER



Jan. 4, 1978

Dear Newspaper Adviser:

Little, if any, research has been done on the campus press. As a university newspaper adviser, I wonder if what I am doing in the areas of newspaper composition and newspaper printing is similar to what you are doing in the same areas.

Your newspaper has been selected as part of a nationwide sample of 250 colleges and universities in which I am studying composition costs and printing costs.

Your completion of this survey and a prompt reply will be of significant value to other advisers, as the results will be published and made available for your use. This survey is part of my dissertation, which is a cost analysis and management study of campus newspapers.

I hope you will take about 10 minutes to answer the questionnaire. Use the stamped envelope to return your responses.

Thank you very much for your cooperation.

Sincerely,

Frank A. Ragulsky
 Director of Student Publications

APPENDIX E

COMPOSITION AND PRINTING SURVEY INSTRUMENT
USED IN THIS DISSERTATION

NEWSPAPER COMPOSITION/PRINTING QUESTIONNAIRE

Name of school _____ City _____ State _____

Name of newspaper _____

Fall 1977 enrollment _____ Copies per issue _____

Does the campus newspaper operate its own printing equipment? yes no composition only

Is the campus newspaper printed in a school-owned print shop? yes no composition only

Is the campus newspaper printed in a commercial shop or by job printing? yes no

Newspaper Income for Fall 1977:

(Please check only one of the following choices where the campus newspaper receives the most income.)

- 1. Student Activity Fee _____
- 2. Student Activity Fee and Advertising _____
- 3. Advertising _____

Does the newspaper have a formula for determining the yearly budget?

yes no Explain how this formula is determined. _____

Composition Costs: (based on a per page cost)

- 1. Tabloid format -- composed by newspaper facilities \$ _____
- 2. Tabloid format -- composed by campus print shop \$ _____
- 3. Tabloid format -- composed by commercial print shop \$ _____
- 4. Standard format -- composed by newspaper facilities \$ _____
- 5. Standard format -- composed by campus print shop \$ _____
- 6. Standard format -- composed by commercial print shop \$ _____

Printing Costs: (based on a quantity contract of the first 1000 copies)

- 1. Tabloid format -- printed by newspaper facilities \$ _____
- 2. Tabloid format -- printed by campus print shop \$ _____
- 3. Tabloid format -- printed by commercial print shop \$ _____

- 4. Standard format -- printed by newspaper facilities \$ _____
- 5. Standard format -- printed by campus print shop \$ _____
- 6. Standard format -- printed by commercial print shop \$ _____

This part of the questionnaire should be completed by campus newspapers owning on-campus composition and/or printing facilities.

What is the total investment in composition equipment to plate preparation?

\$ _____

Please list what this composition equipment includes. _____

What is the total investment in printing equipment from the plate preparation?

\$ _____

Please list what this printing equipment includes. _____

Please explain the number of full time employees needed to work in the composition and/or printing departments of the campus paper.

Has the school ever considered changing the present composition and/or printing arrangements? Please explain.

I would like to have a copy of the survey results. yes no

APPENDIX F

COMPOSITION COSTS PER PAGE

	Absolute Freq.	Relative Freq. (Pct)		Absolute Freq.	Relative Freq. (Pct)
\$ 0	3	1.4	\$ 32	5	2.3
2	1	.5	33	4	1.8
4	1	.5	34	1	.5
5	4	1.8	35	8	3.7
6	1	.5	36	1	.5
7	2	.9	38	2	.9
8	2	.9	40	7	3.2
9	5	2.3	42	1	.5
10	7	3.2	43	1	.5
11	3	1.4	44	1	.5
12	4	1.8	45	2	.9
13	4	1.8	48	1	.5
14	4	1.8	49	1	.5
15	5	2.3	50	8	3.7
16	5	2.3	55	2	.9
17	10	4.6	57	1	.5
18	4	1.8	60	4	1.8
19	4	1.8	65	2	.9
20	13	6.0	68	1	.5
21	3	1.4	70	1	.5
22	4	1.8	75	2	.9
23	4	1.8	76	1	.5
24	5	1.8	78	1	.5
25	28	12.9	82	2	.9
26	1	.5	90	1	.5
27	4	1.8	96	1	.5
28	4	1.8	99	1	.5
30	16	7.4	130	1	.5
31	1	.5	160	1	.5
			Total	217	100.0

APPENDIX G

CROSS-TABULATION OF FREQUENCY BY COMPOSITION COSTS

		<u>Composition Costs</u>										
FRPUB	Count	\$0-10	10.01-20	20.01-30	30.01-40	40.01-50	50.01-60	60.01-70	70.01-80	80.01-100	Raw Total	
	Row Pct Col Pct Tot Pct	1.	2.	3.	4.	5.	6.	7.	8.	9.		
Weekly	2.	24	34	54	20	15	6	4	3	3	163	
		14.7	20.9	33.1	12.3	9.2	3.7	2.5	1.8	1.8		
		92.3	60.7	75.0	74.1	93.8	75.0	100.0	75.0	75.0		
		11.1	15.7	24.9	9.2	6.9	2.8	1.8	1.4			
Daily	1.	2	22	18	7	1	2	0	1	1	54	
		3.7	40.7	33.3	13.0	1.9	3.7	0	1.9	1.9		24.9
		7.7	39.3	25.0	25.9	6.3	25.0	0	25.0	25.0		
		.9	10.1	8.3	3.2	.5	.9	0	.5	.5		
Column Total		26 12.0	56 25.8	72 33.2	27 12.4	16 7.4	8 3.7	4 1.8	4 1.8	4 1.8	217 100.0	

chi-square = 14.63 with 8 degrees of freedom

Significance = < .05

APPENDIX H

CROSS-TABULATION OF PAPER-OWNED PRINTING PLANT
BY COMPOSITION COSTS

<u>Paper-owned Plant</u>					
Composition Costs	Count Row Pct Col Pct Tot Pct	Yes	No	Composition Only	Raw Total
		1.	2.	3.	
\$80.01-100	9.	0	3	1	4
		0	75.0	25.0	1.8
		0	2.3	1.3	
		0	1.4	.5	
\$70.01- 80	8.	0	4	0	4
		0	100.0	0	1.8
		0	3.1	0	
		0	1.8	0	
\$60.01- 70	7.	0	3	1	4
		0	75.0	25.0	1.8
		0	2.3	1.3	
		0	1.4	.5	
\$50.01- 60	6.	0	5	3	8
		0	62.5	37.5	3.7
		0	3.8	3.9	
		0	1.9	1.2	
\$40.01- 50	5.	0	14	2	16
		0	87.5	12.5	7.4
		0	10.7	2.6	
		0	6.5	.9	
\$30.01- 40	4.	3	20	4	27
		11.1	74.1	14.8	12.4
		33.3	15.3	5.2	
		1.4	9.2	1.8	
\$20.01- 30	3.	4	47	21	72
		5.6	65.3	29.2	33.2
		44.4	35.9	27.3	
		1.8	21.7	9.7	
\$10.01- 20	2.	2	24	30	56
		3.6	42.9	53.6	25.8
		22.2	18.3	39.0	
		.9	11.1	13.8	
\$00.00- 10	1.	0	11	15	26
		0	42.3	57.7	12.0
		0	8.4	19.5	
		0	5.1	6.9	
Column Total		9 4.1	131 60.4	77 35.5	217 100.0

chi-square = 36.17 with 16 degrees of freedom

Significant = .01

APPENDIX I

PRINTING COSTS PER 1,000 PER FOUR PAGES

	Absolute Freq.	Relative Freq. (Pct)		Absolute Freq.	Relative Freq. (Pct)
\$ 5	1	.5	58	1	.5
7	1	.5	60	6	2.8
10	2	.9	62	2	.9
11	2	.9	64	1	.5
13	4	1.8	65	2	.9
15	3	1.4	66	2	.9
16	1	.5	67	1	.5
17	3	1.4	68	1	.5
18	2	.9	69	1	.5
20	6	2.8	70	3	1.4
21	2	.9	71	1	.5
22	2	.9	72	1	.5
23	2	.9	75	2	.9
24	2	.9	78	1	.5
25	12	5.5	79	2	.9
26	1	.5	80	6	2.8
27	1	.5	82	1	.5
28	5	2.3	83	1	.5
29	1	.5	85	2	.9
30	11	5.1	88	2	.9
31	2	.9	90	1	.5
32	6	2.8	91	1	.5
33	1	.5	92	1	.5
34	5	2.3	95	2	.9
35	9	4.1	100	6	2.8
37	1	.5	103	2	.9
38	3	1.4	105	1	.5
39	2	.9	106	1	.5
40	9	4.1	107	1	.5
41	2	.9	113	1	.5
42	2	.9	114	2	.9
43	5	2.3	115	1	.5
44	2	.9	120	1	.5
45	3	1.4	125	1	.5
50	15	6.9	127	2	.9
51	2	.9	130	4	1.8
52	3	1.4	135	1	.5
53	2	.9	149	1	.5
54	1	.5	150	3	1.4
55	3	1.4	157	1	.5
			180	2	.9
				217	100.0

APPENDIX J

CROSS-TABULATION OF PRINTING COSTS PER 1,000
PER FOUR PAGES BY STUDENT-NEWSPAPER OWNED
PRINTING PLANTS

Printing Costs	Count Row Pct Col Pct Tot Pct	<u>Paper-owned Plant</u>			Raw Total
		Yes 1.	No 2.	Composition Only 3.	
\$140.01-180	8.	0	11	3	14
		0	78.6	21.4	6.5
		0	8.4	3.9	
		0	5.1	1.4	
\$120.01-140	7.	1	0	0	1
		100.0	0	0	.5
		11.1	0	0	
		.5	0	0	
\$100.01-120	6.	0	4	2	6
		0	66.7	33.3	2.8
		0	3.1	2.6	
		0	1.8	.9	
\$ 80.01-100	5.	0	8	8	16
		0	50.0	50.0	7.4
		0	6.1	10.4	
		0	3.7	3.7	
\$ 60.01- 80	4.	2	13	10	25
		8.0	52.0	40.0	11.5
		22.2	9.9	13.0	
		.9	6.0	4.6	
\$ 40.01- 60	3.	2	35	13	50
		4.0	70.0	26.0	23.0
		22.2	26.7	16.9	
		.9	16.1	6.0	
\$ 20.01- 40	2.	4	47	26	77
		5.2	61.0	33.8	35.5
		44.4	35.9	33.8	
		1.8	21.7	12.0	
\$ 00.00- 20	1.	0	13	15	28
		0	46.4	53.6	12.9
		0	9.9	19.5	
		0	6.0	6.9	
Column Total		9 4.1	131 50.4	77 35.5	217 100.0

chi-square = 35.71 with 14 degrees of freedom

Significant = .001

APPENDIX K

TOTAL INVESTMENT OF COMPOSITION EQUIPMENT

Code	Absolute Freq.	Relative Freq. (Pct)	Code	Absolute Freq.	Relative Freq. (Pct)
\$ 1000	2	2.7	36930	1	1.3
2000	1	1.3	40000	8	10.7
2500	1	1.3	42640	1	1.3
4413	1	1.3	43645	1	1.3
6000	2	2.7	45000	1	1.3
6300	1	1.3	48000	1	1.3
8500	1	1.3	50000	2	2.7
9000	1	1.3	51000	1	1.3
10000	6	8.0	52000	1	1.3
10058	1	1.3	55000	1	1.3
11000	2	2.7	60000	2	2.7
12000	4	5.3	61000	1	1.3
12700	1	1.3	65000	1	1.3
13000	2	2.7	68000	1	1.3
14500	1	1.3	70000	1	1.3
15000	5	6.7	75000	1	1.3
16000	1	1.3	90000	1	1.3
20000	2	2.7	91163	1	1.3
21000	1	1.3	100000	1	1.3
21350	1	1.3	105000	1	1.3
25000	3	4.0	109157	1	1.3
30000	2	2.7	120000	1	1.3
33000	1	1.3	125000	<u>1</u>	<u>1.3</u>
			Total	75	100.0

APPENDIX L

EXAMPLE OF PRINTING CONTRACT

the OXFORD PRESS

THE OXFORD PRESS, INC.
15 S. BEECH STREET OXFORD, OHIO 45056
PH. 523-4139

August 19, 1977

• RICHARD TAYLOR
Business Manager

PRINTING CONTRACT

This contract between the Oxford Press, Inc., (the printer) and the Miami Student (the Student) shall be in effect for the school year beginning August 21, 1977 and ending in May of 1978.

The printer agrees to typeset and print the Student twice weekly on Tuesday and Friday. The printer will provide all materials necessary for producing the Student as well as access to the building on Monday and Thursday evening for the purpose of final typesetting and makeup. Persons working on equipment at the printers office are to be given instruction by members of the printer's staff before they attempt to operate equipment.

Deadlines for submission of copy are to be as follows: advertising and news copy including pictures for Tuesday issues by 8:00 a.m. Monday morning; advertising for Friday issues by 12 noon Wednesday for issues larger than 8 pages and by 8:00 a.m. Thursday for 8 page issues and under; news copy and pictures for Friday issues shall be in by 8:00 a.m. Thursday or earlier if complicated typesetting is involved (such as tabulation) or if a great volume of copy or pictures is planned for a special issue.

The printer will supply completed address plates for subscriptions for the Student and will also stamp the papers and take them to the Post Office by one working day after publication date.

Prices for printing the Student are to be as follows:

No. pages	1st Thou.	Addit. Thou.	
2	96.26	21.20	
4	115.51	26.96	Composition: \$77.50 per page
6	151.09	33.37	less \$10.00 per page for
8	171.93	40.72	pasteup supplied.
10	213.90	48.12	
12	234.85	55.58	Color: Flat \$50.
14	276.81	62.97	
16	297.75	70.42	Halftones: \$1.50 ea.

Multiple sections will be charged at multiple rates, on 1st thou. with combination rate for additional thous.

For the Oxford Press:

William Taylor
Bus. Mgr.

For the Miami Student:

Ralph Kiesel editor
Dan Schumaker Business Mgr.

PUBLISHED SINCE 1932, BUT

New Every Thursday

APPENDIX M

NEWSPAPER RECORD SHEET

THE UNIVERSITY DAILY KANSAN

DAILY NEWSPAPER RECORD SHEET November 6, 7, 8, 9 + 10 1928

	EMPLOYEE	MONDAY					TUESDAY					WEDNESDAY					THURSDAY					FRIDAY					TOTALS			RECAPITULATION					
		#	5	1	3	5	#	5	1	3	5	#	5	1	3	5	#	5	1	3	5	#	5	1	3	5	Time	Time	Cost		No. Issues				
14.00 * LITHOGRAPH AND HAND COMPOSITION	Thoms	18	0				5	0				9	7				6	6				6	5												
	Stewart	24	0				5	5				7	7				6	6				6	1												
	Staples	1	5				7	5				1	0				8	8				1	1												
	Ghss	5	0				5	0				4	0				1	5				1	5												
	Kinn	6	6				5	0				7	7				5	5				8	8												
	Wright	7	1				5	0				7	7				5	5				2	2												
	Colberg - John	7	1				5	0				7	7				5	5				2	2												
	Gray	2	1				5	0				7	7				5	5				2	2												
Colling	2	1				5	0				7	7				5	5				2	2													
	Total Hand Composition	27	1				18	7				29	7				23	5				24	4				123	8			1733	20			
10.00 3.00 COMPOGRAPHIC KEYBOARD	John - Colling	1	8				3	9				6	6				9	9				5	4												
	Ghss	2	9				7	7				1	4				1	9				2	1												
	Kinn - Colberg	2	9				7	7				1	4				1	9				2	1												
	Students	9	6				11	7				20	3				17	0				23	5				78	5			235	50			
	Total Compographic Keyb.	4	8				4	8				8	7				4	6				9	3				3	6			3	6			00
15.00 * CAMERA, STRIPPING, & PLATEMAKING	Reed	1	2				7	7				2	1				1	5				1	3												
	Hollingshead	1	3				8	8				1	0				9	9				1	0												
	Stice	1	8				7	7				1	4				2	2				2	2												
	Watson	1	8				7	7				1	4				2	2				2	2												
	Total Camera, Str., & Platem.	5	0				2	2				5	2				4	6				2	3				19	3			289	50			
10.00 12.00 * Blowsky Ass'ts	Blowsky	2	1				3	3				5	4				2	0				4	0												
	Ass'ts	4	0				3	3				5	4				2	0				4	0												
	Wash-up	4	1				4	0				4	8				4	0				4	0				20	9			209	00			
	Total Press	4	1				4	0				4	8				4	0				4	0				20	9			209	00			
10.00 * Hamer - Dean Delivery	Hamer - Dean	1	4				1	4				1	1				7	6				1	4												
	Delivery	1	4				1	4				1	1				7	6				1	4												
	Total Graph, Adj., & Del.	1	4				1	4				1	4				1	6				1	4				7	2			7	2			00
3.00 * Finer - Miner Pressing	Finer - Miner	1	9				2	4				7	5				2	3				3	2												
	Standing	7	6				6	5				7	8				6	7				7	0												
	Total Proofreading	8	9				8	9				12	3				9	0				10	2				49	3			391	40			
	Plates and Negatives																																		
	Ink																																		
	Stock	10					3	4				16					7	3				12					56	2			263	51			
	Total Labor	65	7				50	4				78	9				61	4				67	5								324	60			
	Complete Total	119	8				94	8				116	5				116	5				109	9								6328	86			

119.81

118.58

116.17

116.55

109.97

Per page = 113.02

VITA ²

Frank Andrew Ragulsky

Candidate for the Degree of

Doctor of Education

Thesis: A COMPARISON OF THE PRODUCTION COSTS OF COLLEGE NEWSPAPERS

Major Field: Higher Education

Biographical:

Personal Data: Born in Pueblo, Colorado, October 25, 1946, the son of Mr. and Mrs. Frank A. Ragulsky

Education: Graduated from Pueblo Catholic High School, Pueblo, Colorado, in May, 1964; received Bachelor of Science degree in Mass communications -- Public Relations from the University of Southern Colorado in 1968; received Master of Arts degree in Cultural Relations from Adams State College of Colorado in 1969; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1979.

Professional Experience: Graduate teaching assistant, Adams State College of Colorado, 1968-69; Instructor in Journalism, St. Bonaventure University, 1969-72; Associate Publisher for News, The Daily O'Collegian and part-time instructor in Journalism, Oklahoma State University, 1972-75; Director of Student Publications and Radio, Southern Methodist University, 1975-79; Adjunct Assistant Professor, Southern Methodist University, 1977-79; Freelance writer, photographer, 1962-79.