A Survey of the Relationship Among Occupational Information and Career Choices of General College Students and Printing Management Students at South Dakota State University and Employees of Fetter Printing Company

Dennis Robert Lundgren

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A SURVEY OF THE RELATIONSHIP AMONG OCCUPATIONAL INFORMATION
AND CAREER CHOICES OF GENERAL COLLEGE STUDENTS AND
PRINTING MANAGEMENT STUDENTS AT SOUTH DAKOTA
STATE UNIVERSITY AND EMPLOYEES OF
FETTER PRINTING COMPANY

BY
DENNIS ROBERT LUNDGREN

A thesis submitted
in partial fulfillment of the requirements for the
degree Master of Science, Major in
Printing Management, South
Dakota State University

1971
A SURVEY OF THE RELATIONSHIP AMONG OCCUPATIONAL INFORMATION AND CAREER CHOICES OF GENERAL COLLEGE STUDENTS AND PRINTING MANAGEMENT STUDENTS AT SOUTH DAKOTA STATE UNIVERSITY AND EMPLOYEES OF FETTER PRINTING COMPANY

This thesis is approved as a creditable and independent investigation by a candidate for the degree Master of Science, and is acceptable as meeting the thesis requirements for this degree, but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

________/ Thesis Adviser/ Date

Head, Department of Journalism and Mass Communication Date
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D.R. L.
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CHAPTER I

INTRODUCTION

I believe that the Graphic Arts industry will in the future face a severe manpower shortage if it fails to attract new blood, young men and women, into the field. This possible manpower shortage led me to study the reasons why people entered the Graphic Arts industry.

People seem to reject the Graphic Arts industry as an occupational choice for several reasons which encouraged me to undertake this study. One of these reasons, the fact that people did not know of the opportunities in the field, was my primary reason. A second possible reason was that these people very seldom had any general information about the field and knew nothing about this area of employment. Thirdly, I feel that most people have had very little, if any, contact with the Graphic Arts industry.

In my opinion more occupational information about the Graphic Arts industry is needed to influence people to make this field their occupational choice. This belief is based upon the assumption that occupational choice is influenced by occupational information, which I will try to illustrate in this study.

Another source of influence on occupational choice is a person's environment. The environmental factor which I believe to be most influential on occupational choice is a person's personal relationships. These personal relations include parents, other relatives, friends and teachers.
Of these personal relationships, I feel that the closer the relationship, the stronger the influence it may have on the person. This belief led me to the opinion that parents do have a significant influence on their children's occupational choice.

Literature Review

Articles are constantly appearing in printing trade periodicals concerning the shortage of manpower and the crisis in educational institutions. Dorsey Biggs in an article, "Shameful Waste in Printing Schools," states that:

The printing industry is growing at a rate of 16 percent per year yet many schools ... are still instructing students in outmoded methods, ... Almost double the number of apprentices now in training will be needed in the industry merely to replace the men who will move on before the present class of apprentices is graduated.

This article and the comments by Biggs stress the fact that more students must enter the printing field to halt the manpower shortage.

"Predictors point out that the current labor shortage may become a lasting trend unless management and educational institutions develop sound programs for dealing with the problem," says Karen K. Ibrahim.¹

Dr. George Halpern, of New York City Community College, has broken the personnel shortage into four major areas: "First is the area of


production; second is sales; another is administrative assistants, and finally, technical services.  Halpern's classifications point out the need for further training of personnel to cope with the technological advancement.

Halpern further stated that:

The problem of recruitment is increasingly engaging the attention of the Graphic Arts industry people. They recognize that the swiftly developing and changing industry must attract young people with educational and technical backgrounds fitting them to hold positions of greatly demanding responsibilities in management, supervision, technology, research, sales, and production.

Robert A. Timmons' thesis, A Survey to Determine the Extent of Retraining in the Printing Industry, discusses the amount of retraining being carried out in the printing industry and concludes that it is insufficient.

Even with this great demand for additional manpower, there is a mental block on the part of industry to recognize that the bulk of its employees must come from post-secondary institutions. A need for new and improved training facilities in the Graphic Arts area exists and more students must be reached with the new story of graphic communications. The concept of a 'dirty-hands trade' must be dispelled.

---


4 Blair, p. 41.


The printing industry specifically has been continually growing and will continue to grow, but it must have the trained personnel to fill the jobs that technology has created. The printing industry is beginning to feel the squeeze today because of the lack of qualified people to occupy the technically-oriented jobs.

The general image of the printing industry is poor. Students still think of this area of occupation as a 'dirty-hands trade' which is meant for drop-outs. "The printing industry must impress these youngsters with the importance of the industry to the point where they will be favorably informed and perhaps make a vocational choice in this area." 7

"Management's most common complaint is that the high schools are not graduating students with enough employment skills." 8 However, it is not completely the failure of the schools. Three failures on the part of industry were listed in an article by Gerald A. Silver, "Why the Printing Industry is Failing to Attract New Blood."

... First, the failure of industry to support high schools, colleges, and other graphic arts teaching programs; secondly, the failure to induce young people to enter the printing industry. Graphic Arts offers careers surpassing many of the leading industries. And finally, failure to respect the vocation of the printing industry.

Some authorities say that a major problem which exists as far as


the printing industry is concerned, is the lack of training in the
Graphic Arts area in the educational facilities. "Only 12 percent of
the high schools in the United States have graphic programs, and too
many of these are outdated."\(^\text{10}\) Although this figure was recorded in
1967, the situation remains relatively the same because of the lack of
qualified teachers in the graphic arts in high schools.

Studies of statistics and case histories of individuals employed in various phases of the printing industry support the thesis that high school students should be exposed to graphic arts. The majority of the individuals were, at one time or another, introduced to some form of the printing industry prior to entering into it as a life profession. Some worked during school years in a print shop, or enjoyed it as a hobby. Others were active on their school newspaper and yearbooks. As a highly specialized skill, the craft has been passed on through family generations.\(^\text{11}\)

A similar situation exists in the nation's colleges.

Most colleges in the United States offer courses which deal with the graphic arts. \(\ldots\) However, the number of colleges which offer specific degree programs in the graphic arts is rather small. There are no more than 35 colleges which provide recognized programs in printing management and production operations. And a close examination of the programs of these colleges would reduce this number by at least 50 percent if the demands of the printing industry are to be considered.\(^\text{12}\)

A recent study of 21 of the largest colleges and universities revealed that only seven percent offered technical courses in the area of graphic arts and only two and a half percent of the entire program was devoted to the area of graphic arts.\(^\text{13}\)


\(^\text{12}\) Ibrahim, p. 8.

\(^\text{13}\) Feirer, p. 23.
Spokesmen for the printing industry feel that:

If the students knew that it is no longer 'appropriate to think of the printing industry as the printing trades alone, but rather as a part of the larger communications industry' they would change their image of it. If they knew that the 'vast industry embraces hundreds of different kinds of jobs, offering men and women opportunities to work with a multitude of kinds of visual materials' they would want to explore its possibilities. If they knew about the field's exploding technology, they would view it as an area which needs the academically-oriented as much or more than the non-academically.

The basic question when discussing occupational choice is what factors are the most influential. This question is continually being attacked by researchers in the fields of psychology, sociology, and vocational guidance. The results of these studies are informative, but they do not agree as to what one factor is the most influential in career choice.

Donald E. Super in his book, The Psychology of Careers--An Introduction to Vocational Development, stresses the belief that occupational choice is a process rather than an event. "The term would denote a whole series of choices, generally in the elimination of some alternatives and the retention of others, until in due process the narrowing down process results in what perhaps might be called an occupational choice." 15

Eli Ginzberg's book, Occupational Choice, relates the idea of a continual process by dividing the process into three distinct periods:

14 Ibrahim, p. 4.

First there is the period in which the individual makes what can be described as a fantasy choice (before age 11); second is the period during which a tentative choice is made (age 11-17); and finally, there is the period in which the individual makes a realistic choice (17 years and older). 

Although there is some agreement that career choice is indeed a continual process, there is no agreement as to the exact age at which this process begins. The consensus is that the process begins at some time between the ages of 5-11. Up to the age of eight, the concept of career choice is more in the wishing stage. Ginzberg's book further points out a study of 11-year-olds which seemed to indicate that, in his opinion, this is the age at which career choice really becomes a true problem.

In many cases people view their decision to enter a certain occupation as a mere accident. "In explaining their occupational choices as 'accidents' most people seem to mean that they were affected by something beyond their control--an unplanned exposure to a powerful stimulus." The idea of 'exposure to a powerful stimulus' opens a wide area of discussion. Of course there are many outside factors which affect career choice and therefore make it difficult to say that any one factor is more influential than any other. "Many of the difficulties connected with occupational choice arise from the emotional turmoil which accompanies general maturation."

17 Ginzberg, p. 492.
18 Ginzberg, p. 19.
19 Ginzberg, p. 6.
Of the many factors influencing career choice externally, occupational information in many forms can greatly affect the thinking pattern of young people. Although there may be a more influential factor than occupational information, this factor can, if used properly and at the right age, have a tremendous impact on young career-minded people.

Occupational information plays an important part in the process of occupational choice by informing the undecided student of the opportunities in any given career. Students should know about all the occupational areas which would match their abilities and skills to the proper occupation. "One cannot evaluate fully an occupation and what it can offer the individual without a complete understanding of the occupation." 20

Information about the occupations affects occupational choice by helping us to discover the occupations that may meet our needs, and by helping us to determine how well satisfied we may hope to be in one occupation as compared to another. 21

The original sources of the occupational information are very simple: the worker who performs the job, the person who pays him for doing it, and the government bureau which regulates employment. The last two sources play an important part in the distribution of this information.

One of the most widely used sources of occupational information is the Occupational Outlook Handbook, which is published annually by the U. S. Department of Labor. This publication gives job descriptions and evaluates each field as to the job opportunities.

20 Super, p. 23.

21 Super, p. 23.
Industries in general have the opportunity to circulate information about the career opportunities in a given area of employment. It is the responsibility of the industries to attract young people into the career fields to fill jobs which are available.

Another factor, relation of father's occupation to child's occupational choice, was brought out in a study by Lindsay in 1967.

The Lindsay study of 1967 determined that the father's occupation and the student's chosen program are related closely. Fifty-four percent of the associate degree candidates at Penn State University had fathers whose occupations were in the skilled labor categories. In comparison 42 percent of the entire male freshmen enrollment had fathers in those categories. The study determined that the father's occupations were closely related to the program chosen by their sons. 22

Purpose of Study: The purpose of this study is to determine if in fact the father's occupation does influence his children's occupational choice. Also it is the intention of this study to determine if occupational information has any influence on occupational choice.

The author wonders whether more occupational information of a general nature about the printing industry would influence more non-printing oriented students to enter printing as a career. If occupational information does indeed influence occupational choice, it is the purpose of this study to determine if any one source is more influential than the others.

This study will also attempt to show that persons having prior contact with the printing industry are more likely to choose the printing

industry as their career. The type of prior experience is also important to this study. The author wonders whether certain types of work experience are more influential than others.
Hypotheses. In this study several hypotheses will be tested.

The college students and printing management students referred to in these hypotheses are from South Dakota State University, spring semester 1970.

A: The student in printing management whose father's occupation is related to the printing industry, is proportionately similar to the Fetter Printing Company employee whose father's occupation is related to the printing industry.

B: The father's occupation influences the occupational choice of general college students and printing management students.

C: Contact with the printing industry prior to making a career choice is similar for printing management students, general college students, and Fetter Printing Company employees.

D: The influence of occupational information on career choice is similar for general college students, printing management students, and Fetter Printing Company employees.

E: The proportion of printing management students who feel there are drawbacks to printing as a career is similar to that of Fetter Printing Company employees.

F: The form in which occupational information is obtained is similar for printing management students, general college students, and Fetter Printing Company employees.
CHAPTER II

METHODOLOGY

In this study three questionnaires were used to obtain the statistical information found in Chapter III.

The first questionnaire was administered to the Printing Management students enrolled at South Dakota State University, spring semester, 1970. This questionnaire was given to the participants in a classroom situation with the permission of the instructors. Twenty-eight of the thirty-five enrolled students filled out the questionnaire.

A second questionnaire was administered to 50 students registered at South Dakota State University, spring semester, 1970. These students were chosen by a systematic selection from the 1970 campus directory. The author selected a number at random, then counted into the directory this number of names. The author then chose every 75th name thereafter until the sample was complete. The questionnaires were given to the college students personally by the author on an individual basis.

The third questionnaire was mailed to Fetter Printing Company of Louisville, Kentucky. A letter requesting the assistance of Fetter Printing Company was mailed during June 1970. A sample of the questionnaire was enclosed with the letter for the approval of the manager. A reply was received on July 11, 1970. The request for between 90 and 110 questionnaires was answered and 100 were sent. Of these 100 questionnaires, 70 were returned in the beginning of December 1970.
Samples of the three questionnaires can be found in the appendices A, B, C, along with copies of the letter of introduction, appendix D; the return reply of Fetter Printing Company, appendix E.

For the purpose of clarity in the presentation of the method of comparison of three questionnaires, the first questionnaire will be referred to as A, the second as B, and the third as C. The proper number and letter classification will be expressed when discussing the methodology further.

Questions 2A and 5C were used to determine if the fathers of students or employees in the printing field were employed by the printing industry. These two questions were included to determine if a significant number of those persons employed by a printing company had fathers who were employed in the printing industry. In order to expand the survey to include the influence of a father's occupation on a child's occupational choice in all fields, in addition to printing, questions 3A and 2B were included.

Although the wording in questions 5A, 19B, and 7C is somewhat different on each questionnaire, the information obtained by each was the same. The purpose of the questions was to determine if prior contact with the printing industry influenced career choices. Also, if prior experience did influence their career choice, what type of experience was most influential, if any.

The purpose of questions 11A, 11B, and 13C was to determine if people felt that more occupational information should be made available to high school students to aid them in the decision-making process of career choice.
Questions 15A and 14B were intended to determine if there was any certain age at which occupational information should be made available to students.

Questions 16A, 16C, 18A, and 18C were included to determine if a significant number of people felt that the promotion of the printing industry by both the industry and schools is sufficient.

Another set of questions which was especially important to this study were questions 20A and 20C. These questions were included to determine if significantly more people in the printing industry felt that there was a drawback or drawbacks in this field as a career choice. Along with these two questions, questions 21A and 21C were intended to determine if any one appeared to be more serious than the others.

The final set of questions included 22A, 6B, and 22C. These questions were used to determine if any one factor significantly influenced people when they were making their career choice.

The lack of a thorough pretest of the questionnaires caused one problem. This problem arose because of improper wording on the part of the author. Although the questions were read over by persons other than the author, some of the questions allowed the respondents to check multiple answers which affected some of the findings in the study and thus no definite conclusion could be made in certain areas.

Statistical Method Used. Chi-square was the statistical method used for analysis of the responses to the selected questions of the questionnaires. Chi-square combines information on the deviation of all the observed frequencies (responses to the questions) from their
corresponding expected frequencies. On the basis of the chi-square com-
putation, if the probability is large, the author is forced to reject
the null hypothesis. 23

23 Margaret Larmen Hagood and David O. Price, Statistics For
pp. 264-65.
CHAPTER III

RESULTS AND FINDINGS

Questionnaire Results. Of the 77 usable responses to question 1A, and 1B, 18 or 23 percent of the total respondents had chosen careers which were directly related to their fathers' occupations.

Twenty-one percent of the respondents whose fathers' occupations were in the agricultural field also selected agriculture or a related field as their career choice. Eight of the 29 printing management students stated that their fathers' occupations were connected with the printing industry. Ninety-six percent of the printing students had previous experience in areas related to printing prior to attending college.

Approximately 33 percent of the general college students had some printing experience and 49 or 70 percent of the Fetter employees had some experience or contact previously. A large number of the Fetter employees stated that their experience was previous employment in some form of the printing industry.
### TABLE 1

**TYPE OF WORK EXPERIENCE OF PRINTING MANAGEMENT STUDENTS, GENERAL COLLEGE STUDENTS AND FETTER PRINTING COMPANY EMPLOYEES**

<table>
<thead>
<tr>
<th>Type of Work</th>
<th>Printing Management Students</th>
<th>General College Students</th>
<th>Fetter Printing Company Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work on some form of printing business other than father's</td>
<td>11 (39%)</td>
<td>2 (12%)</td>
<td>46 (66%)</td>
</tr>
<tr>
<td>Father operated some form of printing business</td>
<td>6 (24%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Worked on school publications</td>
<td>7 (25%)</td>
<td>13 (76%)</td>
<td>22 (31%)</td>
</tr>
<tr>
<td>Friends or relatives worked in printing business</td>
<td>4 (12%)</td>
<td>2 (12%)</td>
<td>2 (3%)</td>
</tr>
</tbody>
</table>

**Note.** These percentages are figured for each category and are based on the total responses in each category.

In response to questions 7A and 10B, 31 respondents said their parents suggested further training to them in their chosen field. An additional 14 responses indicated that their guidance counselor had recommended further training to them. Table 2 lists the responses to these questions.

Seventy-three of the 147 respondents to questions 8A, 7B, and 9C, used occupational information prior to making their career choice. Of these 73 responses, 61 were from the general college students category.
TABLE 2
RESPONSES TO QUESTIONS 7A AND 10B

<table>
<thead>
<tr>
<th>Source that suggested further training</th>
<th>Printing Management Students</th>
<th>General College Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>8 (22%)</td>
<td>23 (37%)</td>
</tr>
<tr>
<td>Other relatives</td>
<td>2 (6%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Guidance Counselor</td>
<td>4 (11%)</td>
<td>10 (16%)</td>
</tr>
<tr>
<td>Former employer</td>
<td>5 (14%)</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Friends</td>
<td>8 (22%)</td>
<td>6 (9%)</td>
</tr>
<tr>
<td>Own decision</td>
<td>9 (25%)</td>
<td>20 (32%)</td>
</tr>
</tbody>
</table>

Note. Total number of responses does not equal 77 because of multiple answers on some questionnaires, these multiple answers cause the total number to be greater than the number of questionnaires mailed out.

Only slightly over 17 percent of the Fetter Printing Company employees had been influenced in their choice of occupation by occupational information, while nearly 80 percent of the general college students and the printing management students had used occupational information.

As to the type of information used, responses to questions 9A, 12B, and 12C indicated a wide variety of answers. Because of the multiple answers on these questions, no one type of information seems more significant than the others. (Table 3)
TABLE 3

TYPE OF INFORMATION DESIRED IN OCCUPATIONAL INFORMATION

<table>
<thead>
<tr>
<th>Type of information</th>
<th>Printing Management Students</th>
<th>General College Students</th>
<th>Fetter Printing Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training available</td>
<td>12 (20%)</td>
<td>28 (18%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td>Jobs available</td>
<td>11 (19%)</td>
<td>28 (18%)</td>
<td>7 (41%)</td>
</tr>
<tr>
<td>Type of employment</td>
<td>14 (23%)</td>
<td>19 (13%)</td>
<td>1 (6%)</td>
</tr>
<tr>
<td>Wage scale</td>
<td>4 (7%)</td>
<td>25 (16%)</td>
<td>2 (13%)</td>
</tr>
<tr>
<td>Geographic area of employment</td>
<td>4 (7%)</td>
<td>17 (11%)</td>
<td>2 (13%)</td>
</tr>
<tr>
<td>Educational and skill requirements</td>
<td>6 (10%)</td>
<td>17 (11%)</td>
<td>2 (13%)</td>
</tr>
<tr>
<td>Advancement opportunities</td>
<td>8 (14%)</td>
<td>20 (13%)</td>
<td>0*</td>
</tr>
</tbody>
</table>

*This answer was not one of the choices on the Fetter Printing Company questionnaire.

The form in which occupational information was obtained, as indicated by response to questions 10A, 8B, and 10C, was quite varied, again because multiple responses were given. A large number of respondents, 58, indicated their source of information was in the form of brochures. Table 4 lists the responses to these questions.
### TABLE 4

**SOURCES OF OCCUPATIONAL INFORMATION**

<table>
<thead>
<tr>
<th>Source</th>
<th>Printing Management Students</th>
<th>General College Students</th>
<th>Fetter Printing Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magazines</td>
<td>7 (18%)</td>
<td>8 (13%)</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>Books</td>
<td>3 (8%)</td>
<td>11 (18%)</td>
<td>6 (22%)</td>
</tr>
<tr>
<td>Brochures</td>
<td>11 (29%)</td>
<td>35 (56%)</td>
<td>12 (46%)</td>
</tr>
<tr>
<td>Movie or slide presentations</td>
<td>3 (8%)</td>
<td>1 (2%)</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>Printing or business periodicals</td>
<td>8 (21%)</td>
<td>2 (3%)</td>
<td>2 (6%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (16%)</td>
<td>5 (8%)</td>
<td>2 (6%)</td>
</tr>
</tbody>
</table>

**Note.** Question 8B listed business periodicals, whereas on the other two questionnaires the answer was printing periodicals.

Seventy-five or slightly more than half of the 147 respondents found the most influential factor in their career choice to be either self interest or some other varying reason. In preparing this study it was anticipated that parental advice would have a very significant influence on children's career choice. Although the respondents did not indicate this fact to any significant degree, parental advice does influence most people indirectly. Table 5 gives the responses to the questioning.
### TABLE 5
RESPONSES TO QUESTIONS 22A, 6B, AND 22C

<table>
<thead>
<tr>
<th>Influential factor</th>
<th>Printing Management Students</th>
<th>General College Students</th>
<th>Fetter Printing Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>8 (20%)</td>
<td>5 (10%)</td>
<td>3 (4%)</td>
</tr>
<tr>
<td>Other relatives</td>
<td>0</td>
<td>2 (4%)</td>
<td>10 (13%)</td>
</tr>
<tr>
<td>Friends</td>
<td>7 (18%)</td>
<td>2 (4%)</td>
<td>18 (24%)</td>
</tr>
<tr>
<td>Self interest and others</td>
<td>15 (36%)</td>
<td>24 (46%)</td>
<td>36 (47%)</td>
</tr>
<tr>
<td>Formal information</td>
<td>10 (24%)</td>
<td>17 (32%)</td>
<td>9 (12%)</td>
</tr>
<tr>
<td>Guidance Counselor</td>
<td>1 (2%)</td>
<td>2 (4%)</td>
<td>0*</td>
</tr>
</tbody>
</table>

* This answer was not on the questionnaire issued to Fetter Printing Company employees.

Nearly 64 percent of the general college students and printing management students responding to question 13A and 13B expressed the opinion that occupational information should come from industry, schools offering training in the given field, and trade organizations in the specific area.

Responses to questions 15A and 14B gave no significant indication as to the age when occupational information should be made accessible.

Twenty-three respondents said any age and 25 expressed the belief that junior high school age is the proper time.

Seventy-eight or slightly more than 81 percent of the printing students and Fetter Printing employees expressed the belief that the
printing industry is not promoting the industry enough. In general, the
responses indicated a variety of programs that could possibly remedy the
situation.

In responding to questions 18A and 18C, seventy-six percent of the
participants felt that the schools offering training in the printing indus-
try are not promoting the training available sufficiently.

Drawbacks are present in every occupation and this is true of the
printing industry also. Forty-eight percent of the Fetter Printing Company
employees said they felt the biggest drawback was the low starting wage
scale. Eight or 28 percent of the printing management students indicated
they felt there were drawbacks in entering printing as a career.

Of the general college students, ninety percent said they had not
been informed of the jobs available in the printing industry nor had they
obtained information about the printing industry. Yet 15 students, nearly
33 percent, said that they possibly could have been influenced to major or
enter the printing industry as a career if they had received more occupa-
tional information. Of these 15 respondents, three were girls who said
they might have been influenced to enter the printing industry.

Decisions to reject the null hypotheses. In all decisions to re-
ject the null hypotheses, except null hypotheses C, D, and F, chi-square
Tables were 2 × 2 tables. In order to reject the null hypothesis with 99
percent confidence, a chi-square value of at least 6.635 was needed.

Data from questions 2A and 5C was used to reject null hypothesis A.
The computed chi-square value was 8.899 which is over the value needed. On
the basis of the attained value of chi-square, null hypothesis A can be re-
jected with 99 percent confidence.
Data computed from questions 3A and 2B led to the decision not to reject null hypothesis B based on the computed value of 0.082.

Null hypothesis E was not rejected based on the chi-square value of 3.931 which was computed from the data on questions 20A and 20C.

Null hypothesis C was also rejected on the basis of the computed data from questions 5A, 19B, and 7C which obtained a value of 20.685, well over the needed value of 9.21. Eighty-five percent of the 147 respondents had prior contact with the printing industry. However, only 15 or 31 percent of the general college students had prior contact.

In determining to reject null hypothesis D, a 3 x 5 table was used to compute a chi-square value of 29.582, well over the 20.09 which was needed and, therefore, null hypothesis D is rejected. This was obtained from questions 22A, 2B, and 22C and indicated that there is no similarity as to the degree of influence that occupational information has on occupational choice among the three categories of printing management students, general college students, and Fetter Printing Company employees.

From data computed from questions 10A, 8B, and 10C, null hypothesis F was rejected based on an attained value of 24.880 from a 3 x 5 table, over the 20.09 required. Therefore, it can be stated that the form in which occupational information is obtained is not similar in the 3 groups: the printing students, general college students and Fetter Printing Company employees. However, of the possible answers, brochures was the most frequently checked with 58 respondents checking this answer which is approximately 46 percent.
CHAPTER IV

CONCLUSIONS, RECOMMENDATIONS FOR FURTHER STUDY AND SUMMARY

Conclusions. From the information obtained from the general college students at South Dakota State University, it was found that more information concerning the printing industry must be made available to the non-printing oriented person. In addition, the fact that the printing industry has varied opportunities for both men and women should be promoted by the printing industry, schools offering training, and trade organizations. This conclusion applies to all industries in general.

Although this study did not determine the significant importance of any one form of occupational information, a large number of respondents used brochures containing occupational information; therefore, brochures seemed to be a primary form of disseminating information about the printing industry.

Based on this study, the majority of the people in the printing industry and students studying in this field, felt a need for stronger promotional efforts in varied programs by all concerned with the printing industry.

Concerning the drawbacks in the printing industry, the outstanding single drawback was that the starting wage in this industry is low. In this study, there were no comparisons for the respondent to make with other occupational fields; yet the majority of responses of Fetter Printing Company employees said that they felt the low starting wage scale was the major drawback. There are, of course, some drawbacks in all areas of work and these drawbacks do not refer specifically to the printing industry.
From this study it is possible to conclude that a father's occupation does have some significant influence on his children's occupational choice. This conclusion is verified by the number of printing management and agricultural students whose father's occupation was also in that respective field.

One final conclusion of this study, and the one of major importance, was that students are influenced by occupational information while they are choosing a career. Although the study did not prove that occupational information is significantly more influential on career choice than any other factor, it can be concluded that occupational information is used to an extensive degree in some phase of occupational choice. The form, source, type of occupation, as well as the accessibility of information, is extremely important to the student. If the student can not get access to this information, then the information is of little or no use. As mentioned earlier in this study, the brochure was the primary source of this information.

Recommendations for Further Study. Further study should be conducted in the promotional programs of the printing industry and the schools offering training in this area. Since the majority of respondents felt that promotional efforts were insufficient, further study is essential. One area in which further study is needed concerns the type of desirable occupational information for use in career choice, specifically in the area of what people want to know about a given industry or trade when making a career choice.

A study by the printing industry or the support of the Printing Industries of America should be given to someone to determine what attracts people into other industries and what the printing industry is not doing to
attract new blood into an ever-expanding industry.

Summary. This study attempted to determine if occupational information was a major factor in influencing career choice and if occupational information was a major factor, what type of information was desirable and in what form. The author felt that occupational information does influence career choice and that the more frequently this information is made available, the more likely a person would be to consider a given career.

The study also found that a father's occupation does have a significant impact on his children's career choice. One avenue then to get information to the young adults is through the parents.

Also this study determined that self interest and desire are important in career choice. The author believes that the printing industry must create a desire in people to attract them into the field. If these people fail to enter the printing industry, the industry will indeed face a crisis in the manpower shortage.
APPENDIX A

QUESTIONNAIRE GIVEN TO PRINTING MANAGEMENT STUDENTS
Name ____________________________

Age __ Year in college __________

1. What is your father's occupation? ____________________________

2. Is your father's occupation in any way connected with the Printing Industry?
   __ Yes
   __ No

3. Did this influence your occupational choice?
   __ Yes
   __ No

4. At what approximate age did you decide to major in Printing Management or the area of Printing?
   __ Before high school
   __ Early high school
   __ Latter years of high school
   __ Beginning years of college

5. Did you have any contact with the Printing Industry before coming to college?
   __ Yes
   __ No

6. If the answer to question 5 is YES, what was the nature of the contact?
   __ Worked in some form of printing business (other than father's business)
   __ Father operated some form of printing business
   __ Worked on school publications
   __ Friends or relatives worked in printing business
   __ Had no previous experience

7. Who suggested further training in the Printing Industry to you?
   __ Parents
   __ Other relatives
   __ Guidance Counselor
   __ Former employer
   __ Friends
   __ Other (please list) ____________________________
8. Did you have any formal information concerning the Printing Industry or the available areas of occupations available to you prior to making your decision?

___ Yes
___ No

9. If the answer to question 8 is YES, specifically what type of information was it? Please check those that apply.

___ Training available
___ Jobs available in Printing
___ Type of employment
___ Wage scale
___ Advancement opportunities
___ Geographical area of employment
___ Educational and skill requirements

10. In what form was this information that you received?

___ Magazines
___ Books
___ Brochures
___ Movie or slide presentations about the printing business
___ Printing periodicals
___ Other (please list) ____________________________

11. Do you feel that more information about the Printing Industry should be made available to high school students?

___ Yes
___ No

12. If the answer to question 11 is YES, what type of information would be the most constructive and informative to the prospective student?

___ Magazines
___ Books
___ Brochures
___ Movie or slide presentations about the Printing Industry
___ Printing periodicals
___ Other (please list) ____________________________

13. What source, in your opinion, should this information come from?

___ Industry
___ Schools offering training in this area
___ Trade organizations
___ All of the above
___ Other (please list) ____________________________
14. Through what source did you receive your information?

- Parents
- Other relatives
- Guidance Counselor
- Coincidental reading
- Information requested by mail
- Information not requested by mail that was sent to you
- Other (please list) ________________

15. At what age should this information be made available to the prospective student?

- Any age
- Sophomore in high school
- Junior in high school
- Senior in high school
- Not until the student enters college
- If none of these above are suitable please list preference ________________

16. In your opinion do you feel that the Printing Industry is promoting the opportunities in this field enough?

- Yes
- No

17. What could be done to better promote the Printing Industry?

- Provide more information on job opportunities
- Build the image of the Printing Industry
- Provide more information concerning the Industry in general
- The industry is doing all it can
- Schools offering training should do the promoting
- Other (please list) ________________

18. Do you feel that schools offering training in the Printing Industry or trade are promoting the field enough?

- Yes
- No

19. If your answer to question 18 is NO, what could these schools do?

- Offer more information about the training available
- Offer more information about the industry
- Make information more accessible
- Offer orientation seminars on the Printing occupations
- Other (please list) ________________
20. In your opinion do you feel there are any drawbacks to the Printing Industry as an occupational choice?
   ___ Yes
   ___ No

21. If your answer to question is YES, what specifically do you feel is the biggest drawback?
   ___ Lack of available jobs
   ___ Low wage scale
   ___ Training available
   ___ Type of work in the Printing Industry
   ___ Other (please list) ____________________________

22. What do you feel was the most important influence to you in making your decision to major in Printing Management?
   ___ Parents
   ___ Other relatives
   ___ Friends
   ___ Guidance Counselor
   ___ Informal information
   ___ Other (please list) ____________________________
APPENDIX B

QUESTIONNAIRE GIVEN TO GENERAL COLLEGE STUDENTS
Name ____________________________

Age __ Male ___ Female

College Major _______________________

1. What is your father's occupation? ____________________________

2. Did your father's occupation have any significant influence on your occupational choice?
   ___Yes
   ___No

3. Did your high school have a guidance counselor with whom you could talk concerning an occupational choice?
   ___Yes
   ___No

4. Did you use this source to help make an occupational choice?
   ___Yes
   ___No

5. If the answer to question 4 is NO, what was your reason for not using this source?
   ___Did not have the available information
   ___He was too busy
   ___Did not feel he could help me in making an occupational choice
   ___Other (please list) ____________________________

6. What factor influenced you the most in making your decision to major in the field you have chosen?
   ___Parents
   ___Other relatives
   ___Friends
   ___Guidance Counselor
   ___Formal information concerning occupations
   ___Other (please list) ____________________________

7. If the answer to question 6 is other than formal information on occupations, did you make use of this information while making your choice?
   ___Yes
   ___No
8. If you used occupational information, what was the source of information?

- Books
- Magazines
- Brochures
- Business periodicals
- Movie or slide presentations of the trade
- Other (please list) ____________________________

9. In what manner did you receive this information?

- Parents
- Other relatives
- Guidance Counselor
- Coincidental reading
- Information requested by mail
- Information not requested by mail that was sent to you
- Other (please list) ____________________________

10. Who suggested further training to you in your chosen field?

- Parents
- Other relatives
- Guidance Counselor
- Former employer
- Friends
- Other (please list) ____________________________

11. In your opinion, would more informational brochures aid students in making their occupational choice?

- Yes
- No

12. If the answer to question 11 is YES, what type of information would be most helpful to students? Please check those that apply.

- Training available
- Jobs available
- Type of employment
- Wage scale
- Advancement opportunities
- Geographical areas of employment
- Educational and skill requirements

13. In your opinion, what source should this information come from?

- Industry
- Schools offering training in the area
- Trade organizations
- All of the above
- Other (please list) ____________________________
14. At what age should this information be made available to the prospective student?

- Any age (no preference)
- Sophomore in high school
- Junior in high school
- Senior in high school
- Not until the student enters college
- If none of these are suitable, please list preference

15. Do you feel that the promotion done by the area of work that you have chosen influenced your occupational choice.

- Yes
- No

16. Were you ever informed of the job opportunities available in the Printing Industry?

- Yes
- No

17. Have you ever obtained any information about the Printing Industry?

- Yes
- No

18. If the answer to question 17 is YES, in what form was this information?

- Magazines
- Books
- Brochures
- Movie or slide presentations about the Printing Industry
- Other (please list) ____________________________

19. Have you ever had any contact with the Printing Industry?

- No contact
- Worked in some form of the Printing Industry
- Father operated some form of Printing business
- Worked on school publications
- Friends or relatives worked in Printing Industry

20. Do you think that more information about the Printing Industry could have influenced you to make a career in this field?

- Yes
- No
APPENDIX C

QUESTIONNAIRE GIVEN TO FETTER PRINTING COMPANY EMPLOYEES
Present Position

Years in Printing Industry ___ Age ___

1. In the business organization, at what is the level of your position?

___ Top level management
___ Middle management
___ Line supervisor
___ Line worker

2. Did you have any formal education in Printing before starting work?

___ Yes
___ No

3. If the answer to question 2 is YES, what type of education was it?

___ College education
___ Trade or vocational training
___ High school vocational training
___ Other (please list) 

4. If you received formal training in the printing business, who suggested this route to you? (Rank those answers that apply in 1,2,3 order as to its influence.)

___ No one, decided on my own
___ Parents
___ Other relatives
___ High school guidance counselor
___ Former employer
___ Friends
___ Other (please list)

5. Is or was your father in any way connected with the Printing Industry?

___ Yes
___ No

6. At what approximate age did you decide to work in the Printing business?

___ Early high school
___ Latter years of high school
___ During college
___ After formal education
___ Other (please list)
7. Did you have any previous printing experience prior to taking your present position?
   ___ Yes
   ___ No

8. If the answer to question 8 is YES, what type of experience was it?
   (Check those that apply.)
   ___ Worked on high school publications
   ___ Worked on college publications
   ___ Worked part-time in some form of printing business
   ___ Father operated some form of printing business
   ___ Previous employment in other printing business full time
   ___ Other (please list) ________________________________

9. Did you use occupational information concerning the Printing Industry prior to making your occupational choice?
   ___ Yes
   ___ No

10. If the answer to question 9 is YES, in what form was it?
    ___ Magazines
    ___ Books
    ___ Brochures
    ___ Movie or slide presentations about the Printing Industry
    ___ Printing periodicals
    ___ Other (please list) ________________________________

11. Through what source did you receive this formal information?
    ___ Parents
    ___ Other relatives
    ___ High school guidance counselor
    ___ Coincidental reading
    ___ Information requested by mail
    ___ Unsolicited information received by mail

12. What type of formal information was this?
    ___ Training available
    ___ Jobs available
    ___ Type of employment
    ___ Wage scale
    ___ Geographic area of employment
    ___ Educational and skill requirements

13. Do you feel that more occupational information would aid people making occupational choices?
    ___ Yes
    ___ No
14. If the answer to question 13 is YES, in what form do you think this information should be?

- Magazines
- Books
- Brochures
- Movie or slide presentations about the Printing Industry
- Printing periodicals
- Other (please list) ________________________________

15. What type of information would be the most influential?

- Training available
- Jobs available
- Type of employment
- Wage scale
- Geographic area of employment
- Educational and skill requirements
- Other (please list) ________________________________

16. Do you feel the Printing Industry is promoting the opportunities in this field sufficiently?

- Yes
- No

17. If the answer to question 16 is NO, what could the industry do?

- Provide more occupational information about this area of employment
- Offer orientation seminars for high school students
- Provide more general information about the Printing Industry
- Other (please list) ________________________________

18. Do you feel that schools offering training in the Printing Industry or trade are promoting the field enough?

- Yes
- No

19. If the answer to question 18 is NO, what could these schools do?

- Offer more information about the training available
- Offer more information about the industry in general
- Make information more accessible
- Offer orientation seminars on the Printing Industry
- Other (please list) ________________________________

20. Do you feel there are any drawbacks to the Printing Industry as an occupational choice?

- Yes
- No
21. If the answer to question 20 is YES, what specifically do you feel is the biggest drawback?

- Lack of available jobs
- Low wage scale
- Training available
- Type of work in the Printing Industry
- Other (please list) 

22. What factor influenced you the most to enter the Printing Industry?

- Parents
- Other relatives
- Friends
- Formal information about Printing as an occupation
- Other (please list) 

APPENDIX D

LETTER OF INTRODUCTION TO FETTER PRINTING COMPANY
June 15, 1970

Dear Mr. Braun:

I am a graduate Student at South Dakota State University majoring in Printing Management. I have chosen a thesis concerning the influence of occupational information on career choice. I will be using only one printing firm in my study and I have chosen Fetter Printing Company to be the experimental group.

Enclosed is a questionnaire for you or someone on your staff to examine. If there are any questions which are objectionable, please feel free to comment and make suggestions. If the questionnaire meets your approval and you will permit your employees to fill out the questionnaire, I would greatly appreciate your cooperation. I am interested in both management and line workers opinions in this questionnaire.

I believe that this survey could shed some light in the area of occupational information and types of information is important to persons using this source while making a career choice.

Again, your cooperation would be greatly appreciated.

Very truly yours,

Dennis Robert Lundgren

Enc (1)
APPENDIX E

REPLY FROM FETTER PRINTING COMPANY
July 9, 1970

Mr. Dennis Lundgren  
Box 129  
Elkton, South Dakota 57026

Dear Mr. Lundgren:

We will be glad to help you with your questionnaire.

When you send the forms please let us know if you want replies from all plant personnel through production management, which would require about 90 sets, or for all company personnel including sales, which would require a total of 110 sets.

Sincerely yours,

Harold W. Braun

Harold W. Braun/cmb  
President
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