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Courses for Managerial Training as Recommended by Managers of Selected Utah Industries

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COURSES FOR MANAGERIAL TRAINING AS RECOMMENDED BY MANAGERS OF SELECTED UTAH INDUSTRIES

by

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B. Edward Lepper

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INTRODUCTION

The United States is a growing nation; it is also an industrial nation. In the past century the spinning wheel has given way to the large clothing mills; a great network of miles and miles of electric power lines has replaced the kerosene lamp and provided power for work that was for years done by hand. Small horse-drawn earth moving equipment has given way to giant motor-driven bulldozers and transportation has progressed from the pony express and stagecoach to the huge trans-ocean airliners that make any spot on the globe only a matter of hours away. In like manner colleges have grown from units with one or two buildings and a meager handful of students to the modern campus with many buildings and thousands of students. These are to mention only a few of the changes. The United States is proud of its growth, proud of its industrial accomplishments, and is proud of its schools and colleges and the educational opportunities afforded to its citizens.

With all the above changes, and many more, has come the birth and expansion of industries to supply the products of this technical advancement. From these industries there comes an ever increasing demand for leadership. No longer is the village shop, operated by a man and his sons, the source of supply. No longer can the "new leadership" be supplied via the owner's family. Industry has outgrown its supply of leadership--outside sources must be relied upon to provide potential managers for today's and tomorrow's industries.

Although they may differ in their statement of purpose, colleges and

universities, generally, propose to prepare their graduates to meet the needs of the society in which they will find themselves. Industry is a part of that society.

This study is being made with the hypothesis that colleges and universities can assume a large part of the training of tomorrow's managers of industry, providing they know the needs of industry. Reason would dictate that men now in positions of management in industry are prepared to advise what training young men should have from colleges and universities to prepare them best for management positions, and to indicate whether or not these schools could provide all the instruction necessary.

Four questions are proposed which form the basis of this study:

1. Is a college education a requirement for a position of management in industry?
2. Is a liberal arts program or a highly specialized one preferred?
3. What courses are recommended for adequate managerial training?
4. Could company training programs be reduced through additional work on the part of colleges and universities?

REVIEW OF LITERATURE

As a beginning for this review, Welp makes a good statement:

> Management is a profession which has a separate body of knowledge that can and must be studied in order to become proficient in the leadership of industry. The development of managers is aimed at presenting this subject of management, and the opportunity for becoming proficient in it, to the men who make up the leadership of business organizations.[1]

An English writer comments, "As a 'profession,' surprisingly little is known of management, or its adequacy in quantity or quality for its professional duties."[2] This seems to be true of industrial management. Much has been written on general management, but texts, and other books dealing specifically with industrial management, are not available.

Urwick says that as early as 1868, General Robert E. Lee put into action a sort of business school at Washington College in Lexington, Virginia. But the University of Pennsylvania was the first to have a business school of university standing. He also states that in 1950 an estimated 370,000 students were majoring in business administration at university level.[3]

About the 1880's a young man named Frederick W. Taylor proclaimed that it was possible by his method to increase production and wages and to decrease costs. This method is now known as "scientific management." However, it was not until 1910 that Taylor's writings were put into non-technical language.[4] Referring to statistics released by the United States

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1. William Welp, Journal of the American Society of Training Directors. p. 50.
2. Anonymous, "What Makes a Manager?" Economist. p. 1.
3. Lyndall F. Urwick, Management Education in American Business. p. 14.
4. Carl Heyel, The Foreman's Handbook. pp. 311-319.

government in 1951, Urwick indicates that between the years of 1910 and 1930 there was a 44 per cent increase in business firms as compared with about a 33 per cent increase in population. By 1950, however, there was a further increase of business firms amounting to 81 per cent, while population had increased only 22.9 per cent. He asserts that although the great corporation plays a vital part in today's economy, it is, comparatively, a recent development. He also points out that the word "man" is the first syllable in the word "management."[5] In a recently compiled list Bricker indicates that in 1931 the Massachusetts Institute of Technology began the first university-sponsored program for management training. Since that time 29 more have been established, only four of which were established before 1950. Of the remaining 25, one was established in 1951, five in 1952, nine in 1953, four in 1954, four in 1955, and two in 1956.[6] Accompanying Mr. Bricker's list is this comment by another writer:

> Expansion and diversification are putting a premium on technical men with business sense. Chemical firms are turning to the university-sponsored programs to improve the executive talent they have--to prepare plant managers for vice-presidents jobs, for example. These university programs for executive development have blossomed in the past 10 years. At the end of the last war programs of this type were offered by only two universities--today at least 29 schools in North America conduct executive training courses. To these must be added the management course sponsored by the American Management Association and several others sponsored by consulting firms and trade associations.[7]

In support of the belief that there is reason to train managers, Welp says that mismanagement is the cause of 87 per cent of business failures, and further states that the greatest potential for American industry lies

5. Urwick, op. cit. p. 17.
6. Anonymous, "Managers Are Trained--not Born," Chemical and Engineering News. p. 2359.
7. Ibid. p. 2365.

in the development of its management manpower.[8] The vice-president of a large chemical company believes that development of adequate management manpower is the number one problem in a company such as his.[9] Glover describes today's management as a philosphy, but predicts that tomorrow's management may be a science at work in a push button economy.[10] It was reported in November, 1956, that a University of California research team had interviewed 5,600 employees who quit a West Coast firm in the span of one year, and discovered that 23 per cent had left because of the poor quality of supervision, while only 8 per cent had left because they were not satisfied with their wages.[11] Ferguson makes a little broader application when he says that nothing is more important to the future of any company than proper training and development of its people.[12] When speaking of executive development, Prior says:

> . . . In this process of standing back and looking at your organization, three questions, I am sure, will come to your mind: (1) What do we need to perpetuate this organization? (2) Who can do it? (3) How can he be trained?[13]

The first two questions would involve specific companies and persons. The third would apply generally. There is no cut and dried plan used by the various companies. One source lists several used by major chemical companies. One company frees one man from all other responsibilities to be made a staff assistant to specialize in the management development program of the production department. Another does much transferring with or between departments, while still another conducts college level conference

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8. Welp, loc. cit. p. 33.
9. "Managers Are Trained - Not Born," loc. cit. p. 2361.
10. John G. Glover, Fundamentals of Professional Management. p. 3.
11. Anonymous, "Did You Know?", Supervisory Management. p. 38.
12. "Managers Are Trained—Not Born," loc. cit. p. 2358.
13. Prior, T. W., "Executive Apprenticeship: The Time for Sound Training," American Management Association, Personnel Series. p. 29.

classes sponsored by college personnel and offered for college credit. From the plants in one large company, two or three attend advance management classes in universities each year. Another company, described as a decentralized company, holds the head of each unit responsible for the planning of instruction for his unit.[14] Another plan in one of the major companies is to include engineers on its General Management Committee and to conduct special management courses for engineers, offering such subjects as economics, psychology, finance, accounting, and humanities.[15] Still another method is to evaluate the executive and then outline a program to remove his deficiencies.[16] In describing an off-the-job training program he helped develop at a university, Odiorne says:

> The program was designed to provide off-the-job training for engineers who were, or soon would be, at the foreman level, and whose primary college training was in engineering or metallurgy. No technical courses were included in the program. Its aim was not to give occupational training but rather to stimulate thinking about management principles and to impart the professional skills required of an executive. Three broad areas were encompassed.
>
> 1. Skill in dealing with people
> 2. Facility in handling difficult administrative problems
> 3. Receptiveness to new ideas[17]

Although no course content was given, one company indicated that it trained all who were willing to take training. This method eliminated those who had little or no interest as well as providing other screening.[18] Planty, et al., expresses the opinion that there is need for company training programs that give specialized training to college recruits in order to help

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14. "Managers Are Trained--Not Born," loc. cit. pp. 2358-2362.
15. George S. Odiorne, "Making Managers Out of Engineers," Personnel. p.263.
16. "Managers Are Trained--Not Born," loc. cit. p. 2360.
17. Odiorne, loc. cit. pp. 263-264.
18. Willard E. Bennett, "Pre-Management Training: One Company's Program," Personnel. pp. 21-22.

them become familiar with the operations of the company and adjust to its organization. It is indicated that this instruction would teach them to apply the principles and theories taught at college and start them toward a leadership role.[19]

Concern for improvement of management training is evident in at least one country outside the United States. In England previous attempts to establish academic programs for management have failed. There were two reasons for the failure: first, the professional bodies have ignored it; and second, the teachers have been poor. Of contemporary conditions one English writer says:

> . . . Even before the war, the "management movement" was gaining momentum, importing its inspiration and some of its jargon and textbooks from America.
>
> . . . the proportion of firms who dovetail an internal training program(me) with a part-time technical college course, or run a sandwich course with an internal scheme and a technical college residential course is still small. But it is growing, as is shown by the rising numbers of part-time students. The idea that universities and technical colleges have something to give is at last taking root.
>
> It is obvious that it will take a further period of experiment to work out processes of management training to suit British conditions. Neither the universities nor the business men show any inclination to develop anything like the American network of business schools. The most fruitful possibility seems to lie in the collaboration of the College of Technology with local industries (the Colleges of Technology are freer to experiment than the technical colleges under the thumb of the Ministry). This in time should establish the relative roles of internal and "academic" training in the making of a manager of any particular grade. It will not come about by central planning, or by the sort of indiscriminate "do gooding" which backs any and every scheme or course on the grounds that even the worst is better than nothing. It will come about as the two parties most concerned--the industrialist and the teacher of management subjects--get to known each other's minds better.[20]

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19. Earl G. Planty, et al., Developing Management Ability. pp. 230-231.
20. Anonymous, "What Makes a Manager?" Economist. pp. 1, 4, 8.

At nearly the same time, Gottshall, in America commented:

> Evidently, therefore, for the technologist to have the maximum chance to become a top executive, he must have a well-rounded training in a number of areas. These include, first, the training the man gets in college--not only in technical subjects, but also in such fields as psychology, speech and human relations; . . . .[21]

Appley is of the opinion that people in management today show a greater and more intense desire for help and information related to the job of management than at any time in history.[22]

Much of the foregoing comment indicates that the universities and colleges are playing, and will be expected to play, a big part in the training of management for the future. Speaking of management education for the future, Stolk says:

> We all agree that one of management's major responsibilities is the development of people. We look to the schools and colleges to help us with the job . . . .
>
> . . . Management is increasing its cooperation with colleges and universities to develop studies in the management area.[23]

LeBold tells of a study made at Purdue University about five years ago. A curriculum study committee was appointed to consider the general problem of determining the educational requirements of graduate engineers "competent to serve the needs of the engineering profession over the next quarter century."

A questionnaire was constructed, which had as one of its purposes, "To determine the attitudes of industrial leaders in regard to engineering curricula." This questionnaire, with an explanatory letter was mailed to about 170 companies who were sending representatives to interview engineering

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21. Ralph K. Gottshall, "Do Engineers Make Good Executives?" The Management Review. p. 813.
22. Lawrence A. Appley, "The Road Ahead for Management," Supervisory Management. p. 11.
23. William C. Stolk, "A Look at the Next Ten Years in Management," American Management Association, General Management Series. pp. 52-53.

graduates, and to individuals of those companies whom the committee felt was in a position to give reliable answers. Usable replies were received from 85 of the 170. When asked if they believed that undergraduate college training should be different for the different categories of engineers (i.e., New Development, Operations, Human Relations), 40 said "yes," and 41 said "no." Those who answered "yes" were asked to indicate what subjects should be emphasized to a great extent. For the four-year program, English-Speech was rated highest in all three categories with scores of 84 per cent, 73 per cent, and 97 per cent, respectively. The combination, Economics-Psychology-Government, was listed for two categories, with scores of 67 per cent and 92 per cent. At the five-year level, English-Speech again was rated highest with scores of 90 per cent, 90 per cent, and 94 per cent, respectively. The combination, Economics-Psychology-Government, was listed again in two categories with scores of 74 per cent and 81 per cent. To the question, "Do you think there is need for an undergraduate curriculum offering an integrated across-the-board type of program with emphasis on the subject matter and methods common to the major fields of engineering?" 50 of the 85 responded "yes," 21 said "no," and 14 did not answer.[24]

Strong reports on questions asked of participants of The American Management Association, General Management Conference held in early 1956, were obtained. These questions were concerning the careers and education of the participants. It was learned that two out of three of those having any college education took specialized training rather than liberal arts, but the ones taking liberal arts training have been more successful, both as

24. William K. LeBold, "Industry Views the Engineering Graduate and His Curriculum," The Journal of Engineering Education. pp. 808-811.

to income and status. Most of the men questioned felt they did not get all they need out of school. Four out of five specialists complained of deficiencies. Fewer liberal arts men complained, but many wished they had more education or had taken more advantage of the opportunities for learning. The men who had both liberal arts and specialized education and the ones who had not attended college seemed less inclined to complain of gaps in their education.[25]

25. Lydia Strong, "Man and Manager: An Executive Profile," The Management Review. pp. 871-878.

METHOD OF PROCEDURE

In order to determine whether or not colleges could share in the training of future managers, and if so, what subjects they should teach, it was decided to ask men in positions of management their opinions. A three-page questionnaire was prepared.* There were nine questions asked relative to management training with blanks provided for the respondent to answer either "yes" in most cases, or in a few cases "no." Also, 31 subject areas were listed which might be taught in a management course. The respondent was asked to check each of these in one of four ways---of most importance, average importance, least importance, or not to be included. At the bottom of the list was provided a space marked "other" in which the respondent could write in a subject area or course not listed. A space was provided at the end of the questionnaire for personal comment beyond the provisions for answers in the check lists and questions. A letter accompanied the questionnaire briefly setting forth the nature of the research and asking the assistance of each respondent in completing and returning the questionnaire. These were sent to selected men in positions of management in the following 50 industries or businesses in Utah.

Amalgamated Sugar Company
Becker Products Company
Bennett's Paint and Glass Company
Cache Valley Banking Company
California Packing Company
Chicago Bridge and Iron Company
Columbia-Geneva Steel Division, U. S. Steel Corporation
Continental Baking Company

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* cf. Appendix.

Crane Company
Deseret News Publishing Company
EIMCO Corporation
Fisher Baking Company
Fuller-Toponce Trucking Company
General Mills Inc., Sperry Division
Globe Mills-Pillsbury Mills, Inc.
Hotel Utah
Industrial Steel Company Inc.
International Smelter and Refining Company
Kaiser Steel Corporation
KSL Broadcasting Station
Lang Company
Linde Air Products Corporation
Morrison-Merrill and Company
Mountain Fuel Supply Company
Mountain States Telephone and Telegraph Company
Pembroke Company
Phillips Petroleum Company
Portland Cement Company of Utah
Redman Van and Storage Company
Salt Lake Hardware Company
Salt Lake Tribune
Salt Lake Union Stock Yards
Strevell-Paterson Hardware Company
Tanner Jewelry Company
Thermoid Western Company
Union Pacific Railroad
United Air Lines
U. S. Smelting, Refining, and Mining Company
Utah Copper Division, Kennecott Copper Corporation
Utah Oil Refining Company
Utah Poultry and Farmer's Cooperative
Utah Power and Light Company
Utah Sand and Gravel Company
Utah Woolen Mills
Walker Bank and Trust Company
Weber Central Dairy Association
Western Phosphates Inc.
Young's Electric Sign Company
Zion Co-Operative Mercantile Institution
Zion Savings Bank and Trust Company

Some of the above are owned by companies with interests in other states, but all have definite operations within the state of Utah. In recognition of effort on the part of these managers, a summary of the study was promised to those completing and returning the questionnaire. However, in respect

of confidence, no identification was made in the study as to who responded and who did not.

Of the 50 copies mailed, 34 usable ones were returned. This number was considered sufficient to complete the study and no second letter was mailed. The answers were assembled and appear later in this report.

PRESENTATION AND ANALYSIS OF DATA

When answering the questions on pages 1 and 3 of the questionnaire, most of the respondents used the indicated manner of reply. However, there were a few who did not answer or who qualified their answer with "perhaps," "possibly," or some other unusable reply.

For the purpose of clarity and brevity, only the figure of usable answers will be given. Discrepancies in total figures may be due to the omission of unusable figures.

In answer to the question, "Do you think colleges and universities can improve their management training programs?" 19 answered "yes" and 10 said "in most cases." To question number 2, "Is a college education a requirement for a position in management in your company or organization?" 2 answered "yes," 12 said "in most cases," 3 indicated a few cases, and 8 said "no." When asked in question 3 if they thought a college education should be a requirement for a position in management, 9 answered "yes," 15 replied "in most cases," 3 said "in a few cases," and 3 said "no." Question 4 asked, "Do you think the trend is in the direction of requiring a college degree to obtain this type of employment?" To this 19 answered "yes," 10 said "in most cases," 2 said "in a few cases," and 2 replied "no." To question number 5, which asked, "Do you favor a liberal arts program?" (By this is meant a broad program with some subjects not directly related to the major.) Fifteen replied "yes," 10 indicated "most cases," 5 said "in a few cases," while 3 said "no." On the other hand, when asked, "Do you prefer a highly specialized program?" (by this is meant a program

devoted entirely to courses directly related to the major), 6 said "yes," 5 "in most cases," 6 indicated "in a few cases," and 16 said "no." To the next question, "In your opinion, is it possible to 'specialize' in a major and at the same time adopt a liberal arts program?" 21 said "yes," 7 "in most cases," 3 "in a few cases," and 2 said "no." In reply to the question, "Do you think it is necessary for company training programs to supplement college instruction?" 20 said "yes," 10 said "in most cases," and 3 indicated "in a few cases." To the last question, "In your opinion, could company training programs be reduced if colleges and universities provided optimum training?" only 4 said "yes," 10 thought so "in most cases," 13 replied "in a few cases," and 6 said "no."

Stated briefly, the above results would indicate that over half of the respondents believe that colleges and universities can improve their management training programs, and over one-third indicate that, in most cases, a college education is a requirement for a position in management in their companies. Over one-half of the respondents believe this requirement should be in effect. Nearly half favored a liberal arts program, and slightly more did not favor a highly specialized program. But, well over one-half believed it was possible to specialize in a major and at the same time adopt a liberal arts program. Nearly three-fifths believed it necessary to supplement college instruction with company training. Less than half had much hope of company training programs being reduced by the providing of optimum courses by colleges and universities.

The results from the check list of suggested subject areas will be given in the following tables. Again it is to be noted that some respondents failed to check all of the subjects listed, and gave unusable answers. Therefore, the rating scores in the following tables may not total 34.

Table 1. All subject areas with ratings of importance in the order in which they appeared in the questionnaire

Subject area	Most	Average	Least	Not included
Speech	24	10	0	0
History	2	13	14	3
Accounting	15	18	1	0
Labor Economics	15	15	2	0
Physics	5	12	7	7
Slide Rule	1	8	12	11
Interviewing	5	18	8	1
English Composition	26	6	0	0
Business Mathematics	16	17	1	0
Psychology	6	20	5	1
Library Science	0	4	8	19
Music	0	2	10	20
Governmental Regulation of Business	8	18	5	2
Secretarial Science	2	8	10	12
Calculus	0	8	9	15
Political Science	3	11	14	4
Chemistry	3	9	9	11
Home and Family Living	2	9	12	10
Industrial Safety	8	19	4	1
Finance	20	14	0	0
Sociology	1	16	13	3
Mechanical Engineering	5	13	6	8
Algebra	8	11	9	5
Foreign Language	2	6	11	13
Guidance and Counseling	5	16	7	4
Art	0	4	6	22
Physical Education and Recreation	1	7	14	12
Management (office and personnel)	19	14	1	0
Education (teacher training)	2	6	12	12
Philosophy	2	11	12	8
Taxation	13	18	2	0
Others				
*Grammar	1	0	0	0
Business Law	1	0	0	0
Statistics	1	0	0	0
Business Organization and Basic Management Principles	1	0	0	0
Marketing	1	0	0	0
Industrial Relations	1	0	0	0

*Grammar might be included with English Composition.

Table 2. All subject areas listed in rank order of most importance and showing other ratings

Subject area	Most	Average	Least	Not included
English Composition	26	6	0	2
Speech	24	10	0	0
Finance	20	14	0	0
Management (office and personnel)	19	14	1	0
Business Mathematics	16	17	1	0
Labor Economics	15	15	2	0
Accounting	15	18	1	0
Taxation	13	18	2	0
Industrial Safety	8	19	4	1
Governmental Regulation of Business	8	18	5	2
Algebra	8	11	9	5
Psychology	6	20	5	1
Interviewing	5	18	8	1
Guidance and Counseling	5	16	7	4
Mechanical Engineering	5	13	6	8
Physics	5	12	7	7
Political Science	3	11	14	4
Chemistry	3	9	9	11
History	2	13	14	3
Philosophy	2	11	12	8
Home and Family Living	2	9	12	10
Education (teacher training)	2	6	12	12
Foreign Language	2	6	11	13
Secretarial Science	2	8	10	12
Sociology	1	16	13	3
Physical Education and Recreation	1	7	14	12
Slide Rule	1	8	12	11
Others				
Grammar	1	0	0	0
Business Law	1	0	0	0
Statistics	1	0	0	0
Business Organization and Basic Management Principles	1	0	0	0
Marketing	1	0	0	0
Industrial Relations	1	0	0	0
Art	0	4	6	22
Library Science	0	4	8	19
Music	0	2	10	20
Calculus	0	8	9	15

Table 3. Subject areas listed in rank order of average importance and showing other ratings*

Subject area	Most	Average	Least	Not included
Psychology	6	20	5	1
Industrial Safety	8	19	4	1
Accounting	15	18	1	0
Taxation	13	18	2	0
Governmental Regulation of Business	8	18	5	2
Interviewing	5	18	8	1
Business Mathematics	16	17	1	0
Guidance and Counseling	5	16	7	4
Sociology	1	16	13	3
Labor Economics	15	15	2	0
Finance	20	14	0	0
Management (office and personnel)	19	14	1	0
Mechanical Engineering	5	13	6	8
History	2	13	14	3
Physics	5	12	7	7
Algebra	8	11	9	5
Political Science	3	11	14	4
Philosophy	2	11	12	8
Speech	24	10	0	0
Chemistry	3	9	9	11
Home and Family Living	2	9	12	10
Secretarial Science	2	8	10	12
Slide Rule	1	8	12	11
Calculus	0	8	9	15
Physical Education and Recreation	1	7	14	12
English Composition	26	6	0	2
Education (teacher training)	2	6	12	12
Foreign Language	2	6	11	13
Art	0	4	6	22
Library Science	0	4	8	19
Music	0	2	10	20

*In the above table and the two following, the subjects listed as "other" have been ignored since they scored zero in all except the most important rating.

Table 4. Subject areas listed in rank order of least importance and showing other ratings

Subject area	Most	Average	Least	Not included
Political Science	3	11	14	4
History	2	13	14	3
Physical Education and Recreation	1	7	14	12
Sociology	1	16	13	3
Education (teacher training)	2	6	12	12
Home and Family Living	2	9	12	10
Philosophy	2	11	12	8
Slide Rule	1	8	12	11
Foreign Language	2	6	11	13
Secretarial Science	2	8	10	12
Music	0	2	10	20
Algebra	8	11	9	5
Chemistry	3	9	9	11
Calculus	0	8	9	15
Interviewing	5	18	8	1
Library Science	0	4	8	19
Guidance and Counseling	5	16	7	4
Physics	5	12	7	7
Mechanical Engineering	5	13	6	8
Art	0	4	6	22
Governmental Regulation of Business	8	18	5	2
Psychology	6	20	5	1
Industrial Safety	8	19	4	1
Labor Economics	15	15	2	0
Taxation	13	18	2	0
Management (office and personnel)	19	14	1	0
Business Mathematics	16	17	1	0
Accounting	15	18	1	0
English Composition	26	6	0	2
Speech	24	10	0	0
Finance	20	14	0	0

Table 5. Subject areas listed in rank order of not to be included and showing other ratings

Subject area	Most	Average	Least	Not included
Art	0	4	6	22
Music	0	2	10	20
Library Science	0	4	8	19
Calculus	0	8	9	15
Foreign Language	2	6	11	13
Education (teacher training)	2	6	12	12
Secretarial Science	2	8	10	12
Physical Education and Recreation	1	7	14	12
Chemistry	3	9	9	11
Slide Rule	1	8	12	11
Home and Family Living	2	9	12	10
Mechanical Engineering	5	13	6	8
Philosophy	2	11	12	8
Physics	5	12	7	7
Algebra	8	11	9	5
Guidance and Counseling	5	16	7	4
Political Science	3	11	14	4
History	2	13	14	3
Sociology	1	16	13	3
English Composition	26	6	0	2
Governmental Regulation of Business	8	18	5	2
Industrial Safety	8	19	4	1
Psychology	6	20	5	1
Interviewing	5	18	8	1
Speech	24	10	0	0
Finance	20	14	0	0
Management (office and personnel)	19	14	1	0
Business Mathematics	16	17	1	0
Accounting	15	18	1	0
Labor Economics	15	15	2	0
Taxation	13	18	2	0

Table 6. Subject areas rated as most important with comparative comparative ratings

Subject area	Most	Average	Least	Not included
English Composition	26	6	0	2
Speech	24	10	0	0
Finance	20	14	0	0
Management (office and personnel)	19	14	1	0
Labor Economics*	15	15	2	0

*Although Labor Economics received the same score for average importance that it did for most importance, 30 out of 34 would rate it average or above. It seems reasonable, therefore, to place it in this table.

Table 7. Subject areas rated average importance with comparative ratings*

Subject area	Most	Average	Least	Not included
Psychology	6	20	5	1
Industrial Safety	8	19	4	1
Accounting	15	18	1	0
Taxation	13	18	2	0
Governmental Regulation of Business	8	18	5	2
Interviewing	5	18	8	1
Business Mathematics	16	17	1	0
Guidance and Counseling	5	16	7	4
Sociology	1	16	13	3
Mechanical Engineering	5	13	6	8
Physics	5	12	7	7
Algebra	8	11	9	5

*It should be noted that although Accounting, Taxation, and Business Mathematics received highest scores under average importance, between one-third and one-half rated them as most important.

Table 8. Subject areas rated least important with comparative ratings*

Subject area	Most	Average	Least	Not included
History	2	13	14	3
Political Science	3	11	14	4
Physical Education and Recreation	1	7	14	12
Philosophy	2	11	12	8
Home and Family Living	2	9	12	10
Slide Rule	1	8	12	11
Education (teacher training)	2	6	12	12

*The subject area of Education was included in the suggested list in view of the fact that some companies use company instructors much like schools and colleges.

Table 9. Subject areas rated not to be included, with comparative ratings

Subject a area	Most	Average	Least	Not included
Art	0	4	6	22
Music	0	2	10	20
Library Science	0	4	8	19
Calculus	0	8	9	15
Foreign Language	2	6	11	13
Secretarial Science	2	8	10	12
Chemistry	3	9	9	11

At the end of the questionnaire was provided a space for comment related to the study but not provided for in the prepared portion of the questionnaire. Several of the respondents used this space for personal comment. This information was not used in preceding sections of the report, but appears below as each respondent replied.

Preparation is never complete implies the remark, "Training is a continuous process." Another believes that colleges do have a part in the training program.

> Because of the fast advancement which is taking place in American business, I believe there is a growing need for management to take time out for special training courses.
>
> I am thinking of training periods of from one to three months time. It occurs to me that there is a real opportunity for some of our colleges to play an important part in this much needed program.

This respondent cautioned universities on their finished product and implies that some on-the-job training is also necessary:

> In my opinion, university training of future business executives should be confined largely to basic subjects in arts and sciences supplemented, of course, with essential business subjects such as accounting, business law, etc. It seems to me that some universities have proceeded on the assumption that their Business School graduates are ready to assume executive positions. No university can turn out a ready-made executive.
>
> As a matter of fact, present-day business is so complicated and specialized that the business school graduate is not much further along in his chosen field than is the graduate from the Medical College who still has graduate work ahead in most cases, as well as the tour of duty in a hospital before starting practice.

Company training is a must indicated by two respondents in the following comments:

> Every business institution has its own policies which may vary widely with other institutions in their own business field, thus requiring company programs which may be considered training. Such policies may be generally covered under sales, production,

maintenance and morale builder programs, thus it would seem that college and university training could and must be supplemented by such company training programs.

I believe that specialization is a college necessity but that additional training is very necessary. This additional training to be tailored to fit a company's particular business.

Another pair would agree that human relations and personnel selection are important as they assert:

Every industry nowadays is so highly specialized, that it would be virtually impossible to expect our colleges to give the students the specific training needed. However, in the managerial field, there are common denominators both within a given company and even between different companies. Supervision is both an art and science. Understanding human nature, and getting along with people, in spite of infinite diversification of personality traits, all kinds of pressures, labor contract complications, etc., requires something of a race of super-men. If managers do not have a great abundance of humility, initiative, and ability to cooperate and get along with everyone, all the training in the world will not avail them enough to make them effective supervisors. The Golden Rule is still the greatest single managerial technique. Most of the technical aspects of management have to (be) tailored to the job at hand, but getting proficient people around us to do the technical work necessary is the biggest part of every manager's job, and if our colleges can train the prospective managers to be able to do this, then colleges will make a real contribution. Personnel selection therefore becomes a fundamental that is often slighted, and interviews, even when done carefully, are woefully inadequate in this connection.

I don't believe universities and colleges can stress too much the importance of and some method or technique of getting along with people--human relations, ability to work with others. They should give training in this field.

Small businesses do not have the opportunity to benefit from college training says this comment:

We have a small, local, independent business . . . . College trained people are not interested in small business. They want security.

We have to get along without people with a college background. We have to do our own training.

This respondent was not in harmony with the methods used in conducting this

study, but was willing to share some opinions as found in the following remarks:

> It seems to me that this "simplified" questionnaire of the R.C.U.C.A.S.T.D embodies most of the disadvantages of such things while offering very little of value. Take for example question 1--do you think any one person in the country knows enough about the work done by all the colleges and universities to answer it intelligently? I am sure I do not have this kind of knowledge.
>
> I think I can sum up my answer to most of your questions in a few words: ideally, every member of management should take his college degree in liberal arts, studying literature, history, composition, philosophy, languages, art--everything in short that does not have a bearing on his future profession, but things that might conceivably give his future life some meaning beyond the commercial sphere. Then let him take his post-graduate degree in one of the few good schools of business administration, and specialize his head off. If he had the good fortune to be able to spend his long vacations doing practical work in a going concern, so much the better.
>
> Of course, this ideal could be attained only rarely. The usual thing would be the best possible compromise, in each individual case, between this ideal and a high school diploma.
>
> I am sorry that I cannot be more help to you, but in all honesty, an attempt to answer most of your questions would be futile.

SUMMARY AND CONCLUSIONS

Although only two respondents replied that a college education was a definite requirement for a position of management in their company, yet there is evidence that this practice is well rooted by nearly one-third replying that in most cases it was a requirement in theirs. The practice of recognizing and utilizing unusual talent may be reason for the above group to reply "in most cases" rather than a definite "yes." Nearly one-half of the respondents expressed the opinion that in most cases a college education should be required for employment, and well over half believed that the trend is in that direction.

Twenty-five of 34 respondents would, in most cases, recommend a liberal arts program for the student, while 16 definitely opposed a highly specialized program. But more than half believed it was possible to specialize in a major and at the same time adopt a liberal arts program. This finding does not oppose the usual plan of acquiring a number of hours in the major field (and possibly a related minor) while at the same time pursuing general education subjects or areas.

Three-fourths of the respondents would include English Composition and Speech, and over one-half would include Finance and Management (office and personnel) in a course of instruction for management. This follows closely the results of the study made at Purdue University, mentioned earlier in this study, where English-Speech received highest rating.

Between one-third and one-half would include Labor Economics, Business Mathematics, Accounting, and Taxation. Though possibly meager, the homespun

philosophy of a few years ago, that if a man could read, write, and compute interest (and taxes), he was academically prepared for life, is subtly reflected in the above results. Tables in the preceding material list other courses or subject areas such as Psychology, Industrial Safety, Governmental Regulation of Business, Interviewing, Guidance and Counseling, Sociology, Mechanical Engineering, Physics, and Algebra with a rating of average importance or above, which should be adequate reason for their inclusion in a planned program of managerial training.

It is definitely necessary for company programs to supplement college instruction according to over half the respondents. Another third believed it so in most cases. Opinion as to whether or not company programs could be reduced by more work on the part of colleges and universities was about equally divided, with only four stating they thought it definitely possible.

What are the applications from this study? It seems conclusive that future managers may expect to attend college as part of their preparation for management positions. Generally, in the field of Industrial Management, the best prepared leader will of necessity have to be trained technically as well as administratively. This means that he will have to put emphasis on a particular field (his major) and at the same time pursue a liberal arts program. Even so, the seemingly best prepared college or university graduate may find himself in a company training program in order to become acquainted with the particular and peculiar needs of his company. And paramount to all management pursuits, the candidate will have to read well, write well, and speak well.

No effort was made in this study to determine specific content of the courses or subject areas, nor the amount of class hours necessary or

recommended. Training for Industrial Management has a promising future before it, and very little history behind it. Additional study in this field should be both revealing and rewarding.

LITERATURE CITED

Anonymous. "Did You Know . . .?" in Supervisory Management 1(12):38. November 1956.

Anonymous. "Managers Are Trained—Not Born," Chemical and Engineering News 34(20):2356-2362. May 14, 1956.

Anonymous. "What Makes a Manager?" Economist 177 (supplement):1-8. December 31, 1955.

Appley, Lawrence A. "The Road Ahead for Management," Supervisory Management 1(1):11-13. December 1955.

Bennett, Willard E. "Pre-Management Training: One Company's Program," Personnel 33(1):19-24. July 1956.

Glover, John G. Fundamentals of Professional Management. New York:Republic Book Company, Inc. 1954.

Gottshall, Ralph K. "Do Engineers Make Good Executives?" The Management Review 44(11):813. November 1955.

Heyel, Carl. The Foreman's Handbook. New York, Toronto, London:McGraw-Hill Book Company, Inc. 1949.

LeBold, William K. "Industry Views the Engineering Graduate and His Curriculum," The Journal of Engineering Education 45(10):808-811. June 1955.

Odiorne, George S. "Making Managers out of Engineers," Personnel 33(3): 259-264. November 1956.

Planty, Earl G., et al. Developing Management Ability. New York: The Ronald Press Company. 1954.

Prior, T. W. "Executive Apprenticeship: The Time for Sound Training," American Management Association, Personnel Series, No. 167:29-31 n.d.

Stolk, William C. "A Look at the Next Ten Years in Management," American Management Association, General Management Series No. 182:49-53 n.d.

Strong, Lydia. "Man and Manager: An Executive Profile," The Management Review 45(10):876-878. October 1956.

Urwick, Lyndall F. Management Education in American Business. New York: American Management Assoc. 1954.

Welp, William. "Facts and Fallacies of Management," Journal of the American Society of Training Directors 10(6):33-37 and 49-50. November-December 1956.

APPENDIX A

Dear Sir:

You will be interested to know that the Research Committee of the Utah Chapter of the American Society of Training Directors is seeking to answer some of the important questions of industrial management. One of these is, "What are the important courses that a student should take in school to prepare for managerial work in industry?"

This question is being presented to leading executives of Utah industries. You have been selected as one of those best qualified to answer on this issue.

In order to use a minimum of your time, a simplified questionnaire is enclosed. Will you please fill in the necessary information and return it at your earliest opportunity. A stamped envelope is also enclosed for your convenience. A summary of the report will be sent you in appreciation of your assistance.

Sincerely yours,

B. Edward Lepper
Graduate Student

C. D. McBride
Chairman, Research Committee

Enclosures: 2

APPENDIX B

QUESTIONNAIRE

Please put a check in ONE of the four blanks as your answer to the following questions.

1. Do you think colleges and universities can improve their management training programs?

   Yes _____ in most cases _____ in a few cases _____ No _____

2. Is a college education a requirement for a position in management in your company or organization?

   Yes _____ in most cases _____ in a few cases _____ No _____

3. Do you think it should be?

   Yes _____ in most cases _____ in a few cases _____ No _____

4. Do you think the trend is in the direction of requiring a college degree to obtain this type of employment?

   Yes _____ in most cases _____ in a few cases _____ No. _____

5. Do you favor a liberal arts program? (by this is meant a broad program with some subjects not directly related to the major)
   Yes _____ in most cases _____ in a few cases _____ No_____

6. Do you prefer a highly specialized program? (by this is meant a program devoted entirely to courses directly related to the major)

   Yes _____ in most cases _____ in a few cases _____ No _____

7. In your opinion, is it possible to "specialize" in a major and at the same time adopt a liberal arts program?

   Yes _____ in most cases _____ in a few cases _____ No _____

Below are listed subject areas about which one or more courses may be taught. In the squares provided, CHECK THE IMPORTANCE you think each subject area has in a program of managerial training. If the subject is of NO importance, check the not included square.

most importance	average importance	least importance	not included	
				Speech
				History
				Accounting
				Labor Economics
				Physics
				Slide Rule
				Interviewing
				English Composition
				Business Mathematics
				Psychology
				Library Science
				Music
				Governmental Regulation of Business
				Secretarial Science
				Calculus
				Political Science
				Chemistry
				Home and Family Living

most importance	average importance	least importance	not included	
				Industrial Safety
				Finance
				Sociology
				Mechanical Engineering
				Algebra
				Foreign Language
				Guidance and Counseling
				Art
				Physical Education and Recreation
				Management (office and personnel)
				Education (teacher training)
				Philosophy
				Taxation
				Others (specify)

Put a check in ONE of the four blanks as your answer.

1. Do you think it is necessary for company training programs to supplement college instruction?

   Yes _____ in most cases _____ in a few cases _____ No _____

2. In your opinion, could company training programs be reduced if colleges and universities provided optimum training?

   Yes _____ in most cases _____ in a few cases _____ No _____

Please write in the space below any further information or comment pertinent to this study.