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Hiring Practices for Skilled Craftsmen in the Construction Industry

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HIRING PRACTICES FOR SKILLED CRAFTSMEN IN THE CONSTRUCTION INDUSTRY

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Introduction

The building construction industry experiences wild fluctuations in demand. Additionally, the industry is characterized by a competitive bid structure. A high labor turnover rate is the natural consequence of these conditions. Compounding this problem is the building industry's highly labor intensive nature. Since contractors will perform the hiring process so frequently, their procedures must be able to identify the best qualified applicants.

The current economic recession has brought many construction firms to a point of near idleness. The unemployment rate among skilled craftsmen is high. This has created a buyer's market in which the contractors can choose the most qualified applicants. As business conditions improve the employers will be flooded with applications for a relatively few positions. Along with experienced construction workers, these applicants will likely include many unemployed factory workers. Contractors will need an effective method of separating the skilled craftsmen from the laid off worker whose listed experience was actually a summer job.

The number of non-union, or open shop, contractors has been increasing dramatically (Northrup & Foster, 1975). Open shop contractors have a freedom in personnel decisions that is not common in union companies. These firms need to develop a hiring system that will replace the procedures which are determined by the union contract in union firms.

Problem Statement

What are Iowa contractors' methods of hiring skilled craftsmen? Specifically, this study will answer the following questions:

1. How do contractors recruit applicants?
2. How do contractors select from among applicants?
3. What percentage of contractors have job descriptions for skilled craftsmen?
4. Who makes the final selection decision?
5. How long do interviews normally last?
6. What percentage of contractors have designated trial periods?
7. Is there a difference in the extent of hiring problems experienced by union contractors and the extent experienced by open shop firms?

Assumptions

1. The Master Builders of Iowa (MBI) membership was adequately represented by the randomly selected sample.
2. All contractors are subject to seasonal demand variations.

Limitations

1. A sample of approximately 50% of the Master Builders of Iowa members was selected.

2. The sensitive nature of the question concerning the extent of hiring mistakes may have affected the accuracy of some responses.
3. The survey was conducted during a severely depressed economic period which could have affected the responses.
4. The effects of equal opportunity regulations were not examined in this study.

Delimitations

1. This study was delimited to contractors in Iowa.
2. All aspects of the study were addressed to skilled craftsmen in the construction industry.
3. Only the initial hiring phase was examined.

Definitions

The following definitions apply for this study:

1. A General Building Contractor is a construction firm which has the primary responsibility for erecting a commercial structure.
2. A Union Shop is a company in which the employees are represented by a labor union.
3. Open Shops are firms which do not have a collective bargaining agreement with their workers.
4. Associated General Contractors of America (AGC) is a national organization of construction firms.

5. Master Builders of Iowa (MBI) is the state chapter of the AGC.
6. Associated Builders and Contractors (ABC) is a national organization of open shop construction companies.
7. Field Personnel are workers who spend the majority of their time at a job site. This includes superintendents and foremen, but not general superintendents.
8. Office Personnel are workers other than field personnel.
9. A Skilled Craftsman is a worker (male or female) who is highly proficient in one or more of the building trades (e.g., carpenter, mason, ironworker).
10. A Hiring Hall is a union administered job referral system whose referrals enjoy advantages over all other job applicants (Ross, 1972).
11. A Double Breasted Operation is an arrangement where a union firm has a separately managed open shop subsidiary.

Literature Review

Open Shop

One aspect of contractors hiring problems is discussed by Northrup and Foster (1975). A portion of their book Open Shop Construction compared the hiring practices of union and non-union companies. The authors commented on the limited data available in this area:

> To the present, no researcher has seriously asked how labor market decisons are made by construction contractors who are unfettered by the strictures of collective agreements.

Foster and Northrup received responses from over 1,500 of the 10,000 contractors who were mailed questionnaires. The sample was chosen by selecting every other firm from the membership list of several contractors' associations. Data from the survey supplemented information gathered through interviews with hundreds of contractors and association executives. Most major regions of the country were represented. Interviewees were chosen by asking local association executives to recommend contractors.

Northrup's and Foster's conclusions concerning hiring practices were in two main categories. First, this study identified the ways in which construction labor problems are unique in industry. Construction's degree of labor intensiveness, and demand fluctuations create an unusually weak employer-employee attachment. "Many workers drift from job to job, employer to employer."

The second conclusion from Northrup's and Foster's study was that the non union portion of the industry is rapidly increasing while the union portion is decreasing. Northrup and Foster also conclude that union firms use formal hiring methods while open shop contractors tend to rely on an informal "grapevine" system. The growth in open shop construction prompts the authors to note the ". . . increasing needs for more effective recruiting tools. . ."

Contractors' Organizations

Concern with current hiring problems has prompted actions by some contractors' organizations. The Associated Builders and Contractors (ABC) conducts a certification program for workers. The Iowa ABC is developing a state-wide referral system (Anderson, 1983). The Master Builders of Iowa (MBI) have also studied the feasibility of a referral system. The MBI general manager felt that such a plan was not practical for their members on a state-wide basis (Lewis, 1983). However, the fact that MBI conducted their study shows that they recognized a need.

Effects of the Economy

Several sources indicate that the current economic recession should not discourage contractors from evaluating their hiring practices. "Managers should use this time wisely to plan for the inevitable recruitment boom. Compare your recruitment techniques to those used by other organizations and develop a list of

potential recruitment techniques" (Stoops, 1982). The idea of a coming recruitment boom was supported by the United States Secretary of Labor, Raymond Donovan, in a speech in March of 1983. Secretary Donovan predicted that an exploding market for repair and construction of the nation's infrastructure will create a shortage of approximately one half million construction workers over the next ten years.

Hiring Costs

It has been estimated that 80-90% of all non-performance problems originate with a poor placement decision (Yager, 1980). The costs of incorrect hiring decisions, which are a major part of the placement process, were discussed by Jackson in his 1972 book, Recruiting, Interviewing, Selecting. He points to the cost of time spent by recruiters and secretaries, overhead such as postage and phone bills, and the cost of training. Also included should be the cost of errors which incompetent newly hired workers may make. This can be disastrous in the construction industry where correcting a mistake may mean tearing down a section to start over. Jackson's final point is the indirect cost of rejecting a highly qualified worker who is then hired by a competitor.

Recommended Methods

Intuition. A reliance on intuition is typical among the employer commonly found in construction. Supervisors have often

risen through the ranks and pride themselves on being able to "spot" a good worker. Also contributing to the use of this technique is the difficulty in measuring the skills needed. Additionally, the workers' high frequency of moves creates problems. Stanton (1977) discussed the use of intuition:

> Some interviewers base their conclusions about the applicant on a intuitive feel, insufficiently supported by objective facts or evidence. These conclusions are rationalized by the argument that whenever the interviewer failed to follow his intuition he usually regretted it. Research has strongly discredited this practice; it is usually unsystematic and invalid. The belief that intuition usually serves the individual correctly is totally fallacious. Our memory conveniently blocks out the many times it has failed us. Only insight and a complete understanding of what an applicant has done in the past will enable us to predict with some accuracy what he or she will do in the future.

Planning. Moffat (1979) stated that "the key to effective evaluation is prior planning." Planning includes creating systems such as an employee referral plan, and a method to track and analyze recruiting results (Stoops, 1982). An analysis of the job should also be part of the hiring plan. Many personnel experts (e.g., Jackson, 1972; Moffat, 1979; Stanton, 1977) agree that written job descriptions are vital to the success of a hiring system. In the construction industry, job analysis could be done by looking at past jobs and talking to foremen. A completed analysis might include:

1. Personal tools needed.
2. Extent of the job's structure.
3. Extent of supervision.

4. Extent of judgment required.

5. Amount of pressure (Stanton, 1977).

As contractors win bids and gear up for new jobs, it is important that they heed the advice of Jackson (1972): "Under no circumstances should they (employers) rush into hurried, ill-thought out recruitment." Stanton (1979) expands on this thought recommending that employers should not lower their standards for selection. Having as many applicants as possible will help overcome the need to hire the "unqualified, but best we can get" worker. For this reason, Stanton suggests recruiting be a continuous process. If possible, exceptionally well qualified workers should be hired even in slow business periods. At the very least, these workers' applications should be put on file.

Reference Checks. Any hiring procedure should include reference checks. "The importance of a thorough check of the applicants' prior work experience cannot be emphasized enough" (Stanton, 1977). Stanton suggests that references be checked by phone rather than mail. He also states that the evaluator should attempt to speak to the immediate supervisor.

Making the Selection. A selection process as described by Felton and Lamb (1972) seeks to answer three basic questions:

1. Can the person perform?

2. Will the person fit the organization?

3. Is the person motivated?

Any criteria which are used to answer these questions should be relevant to the job, finite, easy to investigate, and deep enough to make a good interview. The criteria commonly used fall into an eight point plan recommended by Jackson (1972):

1. Physical
2. Attainments
   - A. Work
   - B. Educational
3. Intelligence
4. Special Aptitudes
5. Interests
6. Attitude
7. Personal Circumstances
8. Motivation

Screening. When a large number of applicants are available, some type of screening must be done. Stanton (1977) suggests a screening interview which lasts only a few minutes, and may even be conducted standing up. The employer will make a visual evaluation, review the application form, and describe the job to the applicant. Knockout questions such as "Do you have a car?", "Can you work overtime?", and "Are you willing to travel?" will eliminate some applicants.

Interviews. Hiring procedures may be ineffective simply because they are not well thought out. A lack of organization is often evident in interviews. Jackson (1972) describes an

interview as ". . . perhaps the most useful selection tool freely available to the recruiter." Some common mistakes made by interviewers include:

1. Failure to establish a rapport.
2. Failure to have a strategy.
3. Talking too much.
4. Reliance on intuition.
5. Making the process too brief and superficial.
6. Interviewing even the obviously unqualified (Stanton, 1977).

These types of mistakes prevent the interviewer from evaluating vital factors like the applicant's attitude, motivation, and maturity. Michaels (1980) states, "The fact of the matter is that very few interviewers take a methodical approach to the interviewing process . . . The interviewer is merely forming an impression of the applicant and not an analysis designed to predict a candidate's chances for success in a particular position."

Consistency. Methods used to select from among applicants also warrant major attention. Moffat (1979) cites research done in the late 60's and early 70's showing that interviewer's evaluations lack consistency. Two interviewers listening to the same response from the same person may reach different conclusions. For this reason, it is important for any hiring

system to include safeguards against this lack of consistency. Moffat recommends the main focus of these safeguards be on "careful definition, and consistent application of the characteristics wanted, to each applicant."

Tests. Some industries use tests to determine a person's degree of manipulative skill. Jackson (1972) says these tests will eliminate candidates who ". . . will, because of their lack of dexterity, never achieve economic speeds in the activity." This type test may be used for some construction jobs but would probably be impractical in most cases. A more useful tool may be the simulation technique discussed by Felton and Lamb (1982). In this method, applicants are given a situation and questioned about how they would proceed. Felton and Lamb recommend the evaluation of judgment, creativity, and poise, as well as correctness.

Methods

Sample Selection

The population for this study was all members of Master Builders of Iowa (MBI). A sample of 80 firms was randomly drawn from the 1982 membership list which consisted of 165 firms. The membership list was published in the July, 1982 issue of Constructor magazine. Jim Seaman, Operations Manager for MBI, estimated that 40% of their members were from union firms. Master Builders of Iowa members tend to be the larger commercial contractors in Iowa. According to the 1983 Iowa Statistical Profile, the average gross income for general building firms with 10 or more employees was roughly $2,300,500.[1]

Survey Instrument

The instrument was reviewed for clarity by two separate panels (Appendix F). One group consisted of instructors involved in the construction curriculum at the University of Northern Iowa (UNI). These educators evaluated the face validity of the instrument. The second group provided suggestions concerning the construction of the questionnaire. The director of the Center for Behavorial Research at UNI, reviewed the entire instrument. A UNI professor specializing in research methods, provided suggestions

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[1] Extrapolated from given data. 54% of Total Receipts/10% of Total General Building Contractors.

on specific items in the instrument. Graduate students enrolled in research projects class also made specific suggestions.
A survey instrument was mailed to a sample of contractors randomly drawn from the membership list of the Master Builders of Iowa.

Data Analyses

The Statistical Package for Social Sciences (SPSS) was used to analyze the data. Responses to each question were tabulated with the sub-program frequencies. Each response was described in terms of its absolute frequency, and cumulative frequency. The number of valid responses, and the mean response for each question were also presented.

Findings

This study examined the ways in which building contractors hire skilled craftsmen, and the extent of problems encountered with newly hired craftsmen. Factors which restrict the effectiveness of contractors' hiring procedures were also identified. The examination was based on the contractors' degree of conformance with methods widely recommended by personnel specialists.

Description of Respondents

Sixty responses were received, representing 75% of the selected sample and 36% of the population. Union contractors comprised 46% of the respondents. The remaining 54% who indicated they were not union contractors were considered open shop firms. Thirty-five percent of all respondents stated they were double breasted operations.

One to five million dollars was the most commonly cited gross income range (38%) for responding firms. The next most common range was $500,000 to $1,000,000 (18%). Both the $5 to $10 million and over $10 million ranges were listed by thirteen percent of the respondents. Three percent of the contractors fell within the $250,000 to $500,000 range and none were below $250,000.

Results

Selection. Questions one, two, and three of the instrument (see Appendix B) examined the methods used to recruit and select skilled craftsmen. The two most frequently cited sources for recruiting skilled craftsmen were: recommendations from employees, and applicants on file. State employment agencies were the least frequently cited source (see Table 1). When selecting applicants, 75% of the respondents conduct personal interviews either always or often. Aptitude tests, which are never used by 79% of the contractors, were identified as the least common method. Table 2 shows that union lists were the second least common method for all respondents. However, for union firms, the union list was used either always or often by sixty-four percent of the contractors (see Table 3).

The major factors considered by employers in a hiring decision were attitude and hands-on experience. Both of these factors were cited by more than ninety-five percent of the respondents as being either very important, or important. In the same two categories, the ability to communicate was listed by seventy percent of the contractors. Education and physical characteristics were cited as being the least important factors (see Table 4).

Extent of Problems. Question nine of the instrument (see Appendix B) dealt with the methods used to recruit, and select skilled craftsmen. Ninety percent of the contractors reported

Table 1

Recruiting Methods Used by Building Contractors

	Percentage of Respondents						
	Always	Often	Occasionally	Never	# Responses	Mean[a]	Standard Deviation
Ask current employees to recommend someone	12.5	41.1	42.9	3.6	56	2.375	.752
Ask other employers to recommend someone	0	12.7	45.5	41.8	55	3.291	.685
Union hiring hall	7.1	26.8	16.1	50.0	56	3.089	1.032
Contact applicants on file	8.9	46.4	41.1	3.6	56	2.393	.705
State Employment Service	5.5	20.0	45.5	29.1	55	3.982	.850
Educational institutions	0	7.3	47.3	45.5	55	3.382	.623
Others (specify)[b]	14.3	42.9	42.9	0	7	2.286	.756

a. One (1) represents ALWAYS and four (4) represents NEVER ratings from respondents.

b. Responses made to others are listed in Appendix E.

Table 2

Selection Methods Used by Building Contractors

	Percentage of Respondents						
	Always	Often	Occasionally	Never	# Responses	Mean[a]	Standard Deviation
Union list	5.4	26.8	14.3	53.6	56	3.161	1.005
Call references	3.6	34.5	45.5	16.4	55	2.745	.775
Personal interview	40.4	35.1	21.1	3.5	57	1.877	.867
Aptitude test	0	3.8	17.0	79.2	53	3.755	.515
Written application	33.9	17.9	28.6	19.6	56	2.339	1.149
Other (specify)					0		

a. One (1) represents ALWAYS and four (4) represents NEVER ratings from respondents.

Table 3

Comparison of Responses by Union
and Open Shop Firms to Selected Questions

	Percentage of Responses			
	Union Shop		Open Shop	
	Always/Often	Occasionally/Never	Always/Often	Occasionally/Never
Question #2 Selection Method:				
Union List	64	36	0	100
Personal Interview	45	55	97	3
Question #8 Restrictions to Effective Hiring:				
Collective Bargaining	61	39	0	100
Difficulty Determining True Skill	61	39	62	38
Difficulty Determining Reliability	50	50	62	38
Qualified Applicants are Unavailable	32	68	55	45

Table 4

Selection Factors Used by Building Contractors

	Percentage of Respondents						
	Very Important	Important	Somewhat Important	Not Important	No. of Responses	Mean[a]	Standard Deviation
General familiarity	20.7	63.8	15.5	0	58	1.948	.605
Specialized knowledge	24.6	56.1	17.5	1.8	57	1.965	.706
Hands on experience	57.6	39.0	3.4	0	59	1.458	.567
Education	6.6	38.6	49.1	3.5	57	2.474	.710
Physical characteristics	14.5	40.0	38.0	7.3	55	2.382	.828
Attitude	62.1	32.8	5.2	0	58	1.431	.596
Ability to communicate	28.1	42.1	29.8	0	57	2.018	.767
Past work record	49.2	39.0	6.8	5.1	59	1.678	.819
Other (specify)					0		

a. One (1) represents VERY IMPORTANT and four (4) represents NOT IMPORTANT ratings from respondents.

that newly hired craftsmen were sometimes found to be totally unqualified. Newly hired craftsmen who were much less qualified than was expected, was a major problem or often a problem for 53% of the respondents. Skilled workers who required fundamental training were a major problem or often a problem for 51% of the contractors (see Table 5). A breakdown of union and open shop responses is presented in Table 6. Open shop firms reported more problems in all three categories.

Restrictions. Contractors identified the factors which restrict the effectiveness of their hiring procedures in question eight of the instrument (see Appendix B). Collective bargaining agreements were cited by 61% of the union firms as a major or often a restriction to hiring effectiveness. Both union and open shop contractors listed difficulty in determining applicants true skills as a major or often a problem slightly more than 60% of the time (see Table 3). The restrictions most commonly cited by all contractors as being either a major problem or often a problem were: time limitations, and difficulty in determining applicants' true skills and reliability. Ninety-five percent of the contractors reported at least occasional problems with the availability of qualified personnel (see Table 7).

Conformance With Recommended Personnel Procedures. The contractors' extent of use of techniques widely recommended by personnel specialists was measured by questions four, five, six, and seven on the instrument (see Appendix B). Job descriptions

Table 5

Extent of Building Contractors' Problems with Newly Hired Craftsmen

	Percentage of Respondents						
	A Major Problem	Often a Problem	Sometimes a Problem	Never a Problem	No. of Respondents	Mean[a]	Standard Deviation
They are found to be totally unqualified	3.4	22.4	63.8	10.3	58	2.810	.661
They are found to be much less qualified than was expected	5.3	47.4	47.4	0	57	2.421	.596
They require some training in fundamental skills	5.3	45.6	45.6	3.5	57	2.474	.658

a. One (1) represents MAJOR and four (4) represents NEVER ratings from respondents.

Table 6

Comparison of Union and Open Shop
Contractors' Problems With Newly Hired Craftsmen

	Percentage of Union Firms		Percentage of Open Shop Firms	
	Major Problem[a]	Minor Problem[b]	Major Problem	Minor Problem
They are found to be totally unqualified	12.5	87.5	37.9	62.1
They are found to be much less qualified than was expected	54.2	45.2	57.1	42.9
They require some training in fundamental skills	37.5	62.5	65.1	34.9

a. Sum of responses to a MAJOR PROBLEM and OFTEN A PROBLEM.

b. Sum of responses to SOMETIMES A PROBLEM and NEVER A PROBLEM.

Table 7

Factors Restricting the Effectiveness
of Building Contractors' Hiring Procedures

	Percentage of Respondents						
	A Major Problem	Often a Problem	Sometimes a Problem	Never a Problem	No. of Respondents	Mean[a]	Standard Deviation
Time limitations	17.0	32.1	41.5	9.4	53	2.434	.888
References difficult to contact	1.9	19.2	59.6	19.2	52	2.962	.685
Collective bargaining agreement	22.6	11.3	17.0	49.1	53	2.925	1.238
Difficulty in determining applicant's true skills	12.7	47.4	40.0	0	55	2.273	.679
Difficulty in determining applicant's reliability	10.9	45.5	43.6	0	55	2.237	.668
Qualified personnel are not available	19.6	23.2	51.8	5.4	56	2.429	.871
Other (specify)					0		

a. One (1) represents MAJOR and four (4) NEVER ratings from respondents.

for all crafts were used by 35% of the respondents. Eighty-one percent of the firms performed the selection process with office personnel. Prospective craftsmen were interviewed by 82% of the employers; with 11-25 minutes being the most common interview length (see Table 8).

Table 8

Length of Average Hiring Interview for Building Contractors

Length*	Percentage of Respondents
More than 25 minutes	22.8
11-25 minutes	36.8
1-10 minutes	22.8
Do not interview	17.5

* Categories established after receiving responses.

Forty-seven percent of the contractors had a designated trial period. Of those employers with trial periods, 41% reported a length of less than one month, 37% had a one to two month period, and 22% had a three to four month trial period.

Conclusions

Recruiting and Selection. The main methods of recruiting applicants were to contact applicants on file or to ask current employees to recommend someone. Contractors use personal interviews as the primary means of selecting skilled craftsmen.

Hands on experience, attitude, and the past work record were the most important considerations when hiring.

Extent of Problems. Contractors' hiring methods were effective in obtaining skilled craftsmen. Mistakes were made, but this was not found to be a major problem. Failures of the current methods are due to the unique nature of the industry (i.e., seasonality, type of tasks performed, competitive bid structure).

Restrictions. Time limitations and difficulty in determining applicants true skills and reliability were the main restrictions to hiring effectiveness. There was only a slight difference between union and open shop firms, in the restrictions that affect them. Collective bargaining agreements were a source of frustration for union contractors but they did not affect the extent of hiring problems.

Conformance With Recommended Personnel Procedures. Thirty-five percent of the contractors had job descriptions. Office personnel made the final selection in 81% of the firms. The average hiring interview lasted 18 minutes. Forty-seven percent of the contractors had a designated trial period. Union firms' problems with newly hired craftsmen were less severe than open shop firms' problems.

Discussion

Classification of Respondents. Respondents were considered union companies if they answered yes to the question, "Are you a

union contractor?" All other respondents were classified as open shop contractors. The question concerning double breasted operations was ignored for this classification.

The double breasted question creates some confusion. Respondents who indicated they were both union and double breasted may have answered with the open shop in mind. This mistake seems unlikely, but its occurrence would definitely affect the union/non-union comparisons.

Selection. Contractors use both formal and informal methods to recruit applicants. The tactic of asking for employee recommendations was cited approximately the same number of times as the more formal method of contacting applicants on file (53.6% vs. 53.3%). This is consistent with Northup's and Foster's (1971) discussion of a 'grapevine' system. Employers may be very familiar with the available workers in a local area. This could be due to the seasonal nature of the industry. Many craftsmen applying for jobs will have worked for the firm on past projects.

Interviews were the most commonly used method of selecting applicants. Apparently, contractors agreed with Jackson's (1972) description of the interview as ". . . perhaps the most useful selection tool. . ." However, 62% of the contractors who called references only occasionally or never, did not agree with Stanton's (1977) emphasis on checking references. This failure to check references may be due to the familiarity with local workers

which was discussed earlier. Or it may simply be due to an urgency to get the workers 'on board' as new jobs are won.

Hands-on experience was a natural choice as the primary factor in selecting skilled craftsmen. Somewhat more surprising was the fact that attitude was cited as being equally important as experience. This supports Felton's and Lamb's (1982) basic questions:

Can the person perform?	=	Hands on Experience
Will the person fit the organization?	=	Attitude
Is the person motivated?	=	Attitude

Another revealing result was the high ranking of the ability to communicate as a selection factor. The 70% of the contractors who ranked this factor as very important or important are evaluating the applicant on a deeper level than just his technical ability. Contractors also displayed a similar attitude by selecting 'general familiarity' as being slightly more important than 'specialized knowledge.'

Extent of Problems. The results provided limited support to claims of a need for more effective hiring methods. Sixty-four percent of the respondents had experienced some situations where newly hired craftsmen were totally unqualified. Considering the seasonal hiring done in the industry, it is doubtful that any method could eliminate this problem completely. The responses seem to indicate the contractors' awareness of a need to improve

hiring methods, however, they did not perceive this as a major problem.

Restrictions. Forty-four percent of the union contractors thought the collective bargaining agreement was a major restriction to hiring effectiveness. This could be an indication of one reason for the growth of open shop firms, however, it should also be remembered that union affiliation did not correspond with increased hiring problems.

Open shop firms were expected to list "Difficulty in determining applicant's true skills" as a major restriction on effectiveness. These contractors do not have the advantage of the certification programs that unions provide. The results of this study indicated that only 15% of the open shop contractors believed this was a major problem. If the first two categories were combined, however, 60% of all the contractors cited this factor. Employers seemed to view this factor as a problem, but not a major one. Compared to union firms, open shop firms reported more problems with newly hired craftsmen. This finding tends to support claims concerning the importance of the certification service provided by unions. Of course, this study dealt only with the initial hiring phase. The quality of workmanship over the long term was not examined.

The listing of time as a major restriction to hiring effectiveness was not surprising. The nature of the industry creates a rushed atmosphere as firms win jobs and gear up to

begin. This atmosphere necessitates an emphasis on Jackson's (1972) and Stanton's (1979) recommendations to create a continuous recruiting process.

Conformance With Recommended Personnel Procedures. Results of this study did not support the published personnel specialists' (Jackson, 1972; Moffat, 1979; Stanton, 1979) emphasis on the importance of the job descriptions. Only thirty-five percent of the respondents had job descriptions. Part of this problem with job descriptions in construction, is the wide variety of tasks performed by a skilled craftsman. Job descriptions in this industry might have to be so general, that they become useless.

Eighty-one percent of the respondents hire from the office, and 75% of the contractors conduct interviews either always or often. These two techniques are likely to create more formality and perhaps decrease the reliance on intuition. This can be a vital factor in the improvement of hiring methods (Stanton, 1977). Using office personnel to select skilled craftsmen also reflects the contractors' recognition of the difficulty of conducting an efficient interview as was described by Michaels (1980). Office personnel are likely to have had more experience in interview type situations, and the office presents an atmosphere which is more conducive to a successful interview.

Forty-seven percent of the contractors who had a designated trial period used a period of one month or less. This seems to be

a reasonable length of time. The craftsmen should have had ample time to display their talent in a variety of tasks in less than one month.

According to widely accepted personnel theories, contractors' failure to use recommended procedures should cause more hiring problems. This survey's results did not support those theories. Two possible explanations are apparent. First, the results of this section of the study may have been inaccurate. The sensitive nature of the question concerning the extent of hiring problems may have made it difficult for respondents to answer objectively. The question is also difficult because it asked the contractors to make an estimate based on their recollections over a long period of time.

Second, the personnel experts may have been wrong. Most of their recommendations cited in the review of literature were based on opinions formed through experience rather than empirical study. The personnel experts may have been wrong in the sense that conventional hiring methods do not fit exactly with the unique nature of the construction industry.

Recommendations

Industry.

1. Contractors should attempt to make hiring more of a continuous process. Recruiting on a limited basis (at

least to have the applications on file) should continue even when no jobs are immediately apparent.

2. Contractors should be cautious in accepting recommendations from published personnel specialists. Those recommendations may be intended for manufacturing industries. The unique nature of the construction industry may invalidate some of the suggestions.
3. Decisions on changing to a double-breasted operation should not be based on expectations of any changes in the extent of hiring problems.
4. Contractors should compare their hiring practices with those used throughout the industry, as reported in this study. The reasons for differences (e.g., a firm which does not interview, although 82% of the contractors do) should be examined.
5. Employers should formally acknowledge the importance of factors such as attitude, and the ability to communicate. One way to do this would be to have an evaluation form where these factors, along with others, are ranked during the interview.

Further Research. The process of conducting a research project inevitably reveals aspects of the problem which were not originally considered. The following questions are presented as suggestions for future researchers:

1. Would an examination of employers' payroll records provide more accurate information than a questionnaire? The number of skilled craftsmen who were fired after a short period of time could be counted.
2. Would a comparison of several different years reveal any changes in hiring practices?
3. How does the level of business activity affect hiring practices and effectiveness?
4. What percentage of newly hired craftsmen have worked for the employer before?
5. How do minority employment regulations affect contractors' hiring practices?
6. How do the extent of hiring problems experienced with union craftsmen, ABC craftsmen, and other craftsmen in open shop firms compare to each other?

Appendix A

Cover Letter

University of Northern Iowa

Department of Industrial Technology

Industrial Technology Center
Cedar Falls, Iowa 50614
Phone (319) 273-2561

March 14, 1983

Dear

I am writing to request your assistance in researching a topic which I think you will find of interest. I am surveying building contractors to determine the common methods of hiring skilled craftsmen. This study will aid contractors in evaluating their own systems. The University of Northern Iowa Student Chapter of Master Builders of Iowa provided a MBI membership list from which your name was randomly drawn.

Please complete the enclosed questionnaire concerning the recruitment and selection of skilled craftsmen. You may make allowances for the current business slump by applying all questions to typical practices during a moderately successful business year. All replys are strictly confidential. Please return the completed questionnaire in the enclosed stamped/self-addressed envelope as soon as possible.

Your effort in completing the questionnaire will greatly aid in the search for methods of assisting contractors in finding the best qualified workers.

Thank-you.

Sincerely,

Jim Off
Project Director

Appendix B

Questionnaire

1. In the table below please check ( ) how often you use each of the following methods when recruiting applicants.

	Always	Often	Occasionally	Never
Ask current employees to recommend someone	☐	☐	☐	☐
Ask other employers to recommend someone	☐	☐	☐	☐
Union hiring hall	☐	☐	☐	☐
Contact applicants on file	☐	☐	☐	☐
State employment service	☐	☐	☐	☐
Educational institutions	☐	☐	☐	☐
Others (Specify)_____	☐	☐	☐	

_____

2. How often do you use each of the following methods when selecting among applicants?

	Always	Often	Occasionally	Never
Union list	☐	☐	☐	☐
Call references	☐	☐	☐	☐
Personal interview	☐	☐	☐	☐
Aptitude test	☐	☐	☐	☐
Written application	☐	☐	☐	☐
Other (Specify)_____	☐	☐	☐	

_____

3. How important are each of the following factors when selecting from among applicants?

	Very Important	Important	Somewhat Important	Not Important
General familiarity	☐	☐	☐	☐
Specialized knowledge	☐	☐	☐	☐
Hands on experience	☐	☐	☐	☐
Education	☐	☐	☐	☐
Physical characteristics	☐	☐	☐	☐
Attitude	☐	☐	☐	☐
Ability to communicate	☐	☐	☐	☐
Past work record	☐	☐	☐	☐
Other (Specify)_____	☐	☐	☐	

_____

4. Does your firm have job descriptions for all crafts?

Yes___ No___

5. What is the title of the person who makes final selection from among applicants?

_____

6. If you normally conduct interviews approximately how many minutes do they last?

_____min. ___Do not interview

✪ OVER PLEASE ✪

7a. Do you have a designated trial period for new workers?

Yes___ No___

7b. If yes, how long is that period?

____ Less than 1 month 3-4 Months ____

____ 1-2 Months More than 4 Months _____

8. To what extent do each of the following factors restrict the effectiveness of your hiring procedure?

	A major Problem	Often a Problem	Sometimes Problem	Never a Problem
Time limitations	☐	☐	☐	☐
References difficult to contact	☐	☐	☐	☐
Collective bargaining agreement	☐	☐	☐	☐
Difficulty in determining applicant's true skills	☐	☐	☐	☐
Difficulty in determining applicant's reliability	☐	☐	☐	☐
Qualified personnel are not available	☐	☐	☐	☐
Other (Specify) _____	☐	☐	☐	

_____

9. To what extent do each of the following factors restrict the effectiveness of your newly hired craftsmen?

	A major Problem	Often a Problem	Sometimes Problem	Never a Problem
They are found to be totally unqualified	☐	☐	☐	☐
They are found to be much less qualified than was expected	☐	☐	☐	☐
They require some training in fundamental skills	☐	☐	☐	☐

The following information is requested in order to make the data more meaningful by providing a basis for comparison.

A. Are you a union contractor?

Yes____ No____

B. Do you operate on a double breasted basis?

Yes____ No____

C. Please check the box which represents the range of your firms highest level of gross income during one of the past 5 years.

____Less than $ ¼ Million ___ $½ to 1 Million ___ $5 to 10 Million

____$ ¼ to ½ Million ___ $ 1 to 5 Million ___ $ More than 10 Million

Feel free to add comments on any special hiring problems you have encountered or any methods you use which are especially effective.

Appendix C

Human Subject Review Board

Consent Letter

The Graduate College

UNIVERSITY OF NORTHERN IOWA • CEDAR FALLS, IOWA 50614 • 138 LATHAM HALL • OFFICE OF THE DEAN • 319-273-2748

March 7, 1983

Jim Off
Dept. of Industrial Technology
University of Northern Iowa

Dear Mr. Off:

Your project, Hiring Practices for Skilled Craftsmen in the Construction Industry, which you submitted for human subjects review on March 2, 1983 has been determined to be exempt from further review under the guidelines stated in the UNI Human Subjects Handbook. You may commence participation of human research subjects in your project.

Your project need not be submitted for continuing review unless you alter it in a way that increases the risk to the participants. If you make any such changes in your project, you should notify the Graduate College Office.

If you decide to seek federal funds for this project, it would be wise not to claim exemption from human subjects review on your application. Should the agency to which you submit the application decide that your project is not exempt from review, you might not be able to submit the project for review by the UNI Institutional Review Board within the federal agency's time limit (30 days after application). As a precaution against applicants' being caught in such a time bind, the Board will review any projects for which federal funds are sought. If you do seek federal funds for this project, please submit the project for human subjects review no later than the time you submit your funding application.

If you have any further questions about the Human Subjects Review System, please contact me. Best wishes for your project.

Sincerely,

Ruth Ratliff
Assistant to the Dean
for Faculty Services

RR:tac

cc: Dr. John C. Downey
Dr. Clifford G. McCollum
Dr. John T. Fecik

Appendix D

Population Frame

Appendix E

Responses to 'Others' and Comments

Responses to 'Other' on Question Number 1
of the Instrument (see Appendix B)

Responses to Others	Frequency Count
1. Off the street	1
2. Newspaper ads	2
3. Personal knowledge of area crafts people	1
4. Known talent	1
5. Minority assistance firms	1
6. Unspecified	1

There were no responses to 'other' on any of the other questions.

List of Comments

1. Dearth of skilled construction help in the commercial industrial field.
2. These answers are for our union company, a different set of answers could and would be given for an open shop company.
3. Wage and intensity of work in general is of concern. For a strange reason the higher the wage, the less the interest or intensity on performing a job or task which the skilled or unskilled labor force has to perform.
4. Questionnaire was answered only with union shop in mind.

Appendix F

Instrument Review Panel

Instrument Review Panel

University of Northern Iowa Industrial Technology instructors:

1. Dr. M. Roger Betts
2. Mr. Stephen P. Stulken
3. Mr. David S. Peters

Director of the Center for Behavorial Research at the University of Northern Iowa: Dr. Robert Kramer

University of Northern Iowa professor specializing in research methods: Dr. Patrick W. Miller

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