This study was designed to expand extant knowledge about factors that impact the job application decisions of experienced teachers. A total of 136 experienced teachers, enrolled in graduate education courses at a large Midwestern university, role played the part of job applicants for an elementary teacher position. Participants rated four versions of a formal position advertisement varied with respect to attributes used to describe the job (intrinsic and extrinsic) and with respect to the order of the job description in the advertisement copy. The job description was placed either first or last in the advertisement copy. Findings indicated that experienced male teachers as applicants are attracted more by extrinsic job attributes placed last in recruitment advertisements, and females are attracted more by intrinsic job attributes placed first in recruitment advertisements. The results indicate that marketing theory is a useful framework for designing empirical investigations about educational recruitment practices. (Contains 95 references.) (SM)
Morphet Dissertation Award for 1996

Recruitment Effects: The Influence of Sex, Job Content, and Information Order on Reactions of Applicants

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ABSTRACT

Recruitment Effects: The Influence of Sex, Job Content, and Information Order on Reactions of Applicants

Introduction

Recruiting the best qualified teachers possible may be the most important task allotted to educational administrators, and the factor most critical to success of the educational program (Bolton, 1969). Despite the importance of teacher recruitment to educational outcomes, relatively little is known about the reactions and decision-making processes of experienced teachers, as applicants, prior to the initial employment interview (Young, Rinehart & Heneman, 1993). Application decisions are especially critical to the teacher recruitment and hiring process. If teachers targeted for recruitment do not respond, by making formal application, to the recruitment practices (e.g., position advertisements, job description mailings, recruitment videos) utilized by the hiring organization, there will be little opportunity to influence their job choices through subsequent recruitment activities such as interviews (Rynes, 1991).

The purpose of the present investigation was to expand extant knowledge about factors that impact the job application decisions of experienced teachers. This was accomplished by conducting a laboratory experiment. A total of 136 experienced teachers (68 females and 68 males), enrolled in graduate education courses at a large Midwestern university, role played the part of job applicant for an elementary teacher position. Participants rated four versions of a formal position advertisement varied with respect to attributes used to describe the job (intrinsic, extrinsic) and with respect to the order of the job description in the advertisement copy. The job description was placed either first (primacy) or last (recency) in the advertisement copy.
This study achieved three advancements: (1) empirical investigation of teacher recruitment advertisements; (2) examination of a combination of variables (applicant sex, job attributes, information order) not studied previously; and (3) application of general marketing theory (Drucker, 1973) and recruitment-as-job-marketing theory (Maurer, Howe & Lee, 1992; Smither, Reilly, Millsap, Pearlman & Stoffey, 1993) to the educational recruitment context. Findings are useful to administrators attempting to maximize the size of applicant pools, or diversify applicant pools for affirmative action purposes. Successful testing of marketing theory applied to educational recruitment provides educational researchers with a valuable framework for conducting future empirical investigations about recruitment practices.

Theory and Rationale

General marketing theory (Drucker, 1973) stipulates satisfaction of customer needs should be the focus of all organizational activities. From this perspective emerged recruitment-as-job-marketing theory (Maurer et al., 1992; Smither et al., 1993), which adopts a customer-supplier model as a broad value system with regard to the staffing function: "...the model views applicants as customers and the organization as a supplier, or vendor of available jobs" (Smither et al., 1993, p. 50). The employer succeeds in recruitment by understanding customer (applicant) product (job) needs, and utilizing marketing practices (recruitment practices) that satisfy customer (applicant) needs. This study utilized this theoretical perspective by constructing teacher recruitment advertisements containing job descriptions hypothesized to be maximally attractive to a male and a female group of applicants. Based on previous research (e.g., Jurgensen, 1978; Young, 1984) males were hypothesized to react more favorably to extrinsic job attributes, while females were hypothesized to react more favorably to intrinsic job attributes. In all, seven null hypotheses were tested to assess the three independent variables involved in the study: applicant sex (male, female), job attributes (intrinsic, extrinsic), and information order (primacy, recency).
Research Procedures

This study utilized a 2 x 2 x 2 completely crossed, fixed-factor factorial analysis of variance (ANOVA) design. Participants (N = 136) were teachers enrolled in thirteen graduate classes selected at random from classes at a large college of education located at a major research university in the Midwest. Sample size was determined by performing a power analysis according to procedures recommended by Cohen (1977, pp. 396-400). The power analysis was based on a desired minimum effect size (omega-squared = .06), a defined level of significance (alpha = .05), and a specific power level (power = .80).

Participants (68 males, 68 females) were assigned randomly to treatment conditions. Each participant evaluated a teacher position advertisement varied by job attributes (intrinsic, extrinsic) and by information order (primacy, recency). The dependent variable (reaction to a position advertisement) was a multiplicative composite score consisting of four items with five-point Likert-type scales (five being more favorable than one). The four items (coefficient alpha = .86) provided applicant ratings for: (1) overall attractiveness of the job; (2) likelihood of applying for the job; (3) likelihood of accepting an interview; and (4) likelihood of accepting the job if offered.

Previous research (e.g., Herzberg, Mausner & Snyderman, 1959; Jurgensen, 1978; Lawler, 1973, Steers & Porter, 1983; Young, 1984; Young, Rinehart & Place, 1989; Young et al., 1993) was used to identify intrinsic and extrinsic job attributes. A content validity paradigm suggested by Anastasi (1976) and overlap statistic procedures developed by Tilton (1937), and recommended by Dunnette (1966) for use in the recruitment context, were used to validate job attributes and form job descriptions with equal numbers of attributes assessed by a pilot group (N = 43) as equivalent in importance. The pilot group performed a successful manipulation check of the information order variable also. Data for the actual study was collected during the months of March and April.
1995. A bibliography is contained in Appendix A and instruments utilized in the study are contained in Appendix B.

Findings and Interpretations

The three-way ANOVA was performed and results were analyzed using procedures recommended by Keppel (1991). At the specified alpha level of .05, two significant effects were detected: (1) a sex by job attribute interaction ($F = 38.88, p < .01$), and (2) a job attribute by information order interaction ($F = 4.89, p < .05$). Findings indicated experienced male elementary teachers, as applicants, are attracted more by extrinsic job attributes placed last in recruitment advertisements, and females are attracted more by intrinsic job attributes placed first in recruitment advertisements. To determine the practical significance of these interactions, procedures developed by Winer (1971, p. 430) were used to calculate omega-squared. These calculations indicated 22 percent of the variance in applicant reaction to a position advertisement is accounted for by the sex by job attribute interaction. Two percent of the variance in applicant reaction is accounted for the job attribute by information order interaction. Descriptive statistics for the participants are contained in Table 1 (Appendix C). Results of the ANOVA are contained in Table 2 (Appendix D).

Results of this study must be interpreted within certain limitations. Inexperienced teachers (as opposed to experienced applicants), teachers without graduate school experience, or teachers from different geographical regions and different types of institutions might have reacted differently than the individuals who participated in the present investigation. Further, it is possible applicants might have reacted differently under actual teacher recruitment conditions than they reacted under the conditions of the experimental setting used in this study. Also, it is possible applicants at different school levels (middle school, secondary) might have rated jobs described in position advertisements differently than the elementary teachers who participated in this study.
Conclusions and Recommendations

From a practical perspective, findings from this study are useful for the task of recruiting experienced elementary teachers. If the goal is to recruit men, administrators should describe the job in extrinsic terms and place the job description at the end the advertisement. If the goal is to recruit women, the job should be described using intrinsic attributes of the job and the job description should be placed at the beginning of the advertisement.

Study findings lend further support to general marketing theory as a recruitment tool, and to the recruitment-as-job-marketing theory as a recruitment research framework. Experienced male and female teachers, as applicants, differ regarding their job-related needs in the recruitment context. Marketing theory suggests recruitment practices (e.g., position advertisements) should be patterned after marketing practice counterparts (e.g., print advertisements) and highlight needs (e.g., attributes of the job) known to be attractive to the individuals targeted for recruitment. This study demonstrated marketing theory is a useful framework for designing empirical investigations about educational recruitment practices.

Future recruitment studies about applicant reactions to recruitment practices should investigate the influence of additional personal characteristics (e.g., race, age, values), job message characteristics (e.g., length, style), and job attributes (e.g. work environment). There is also a need to extend the present line of inquiry to examine other educational recruitment practices (e.g., job description mailings, recruitment brochures, personal interviews). The methodology used in this study can be improved by: (a) investigating applicant reactions across multiple recruitment stages (e.g., application, employment interview) in the same study; and (b) by conducting a study under actual teacher recruitment conditions.
Appendix A

References

Note: This appendix includes all works comprising the base of knowledge that supported development of the research reported in this dissertation.


Recruitment Effects


Appendix B

Biographical Data

Date of Birth: Mo.____Day____Year____

Sex:   Female___  Male___

Race (check one):
   __Hispanic
   __White, not Hispanic
   __Black, not Hispanic
   __Asian
   __Native American
      (American Indian, etc.)

Number of years of teaching experience____

Current teaching position:   ___Elementary  ___Secondary  ___Not Teaching

Undergraduate major___________

Highest degree held (e.g., B.A., B.S., M.A., M.S., etc.)__________

Approximate number of times you have interviewed for a teaching position____

Number of districts in which you have taught____

Are you currently seeking a teaching position? ___No  ___Yes
TWO ELEMENTARY TEACHING POSITIONS AVAILABLE

ABOUT THE JOB: Madison County is a school system where teachers are able to feel satisfaction in their work and have a sense of achievement concerning teaching. Teachers are given maximum responsibility for teaching duties. Work is challenging and provides teachers with opportunities for self-expression on the job. Positive relations with supervisors and recognition for teaching accomplishments are stressed.

GENERAL INFORMATION: Madison County School System invites qualified individuals to apply for two vacant elementary teaching positions. Madison County is a multiple-school district serving a stable community. Applicants should possess the ability to instruct students effectively. Successful candidates will be able to demonstrate dedication to teaching and an ability to serve as a positive role model for students.

APPLICATION PROCESS: Applications are accepted until the position is filled. Send a letter of application, resume, copies of certifications (or proof of eligibility to obtain such), and placement office credentials to: Dr. R.N. Smith, Superintendent of Schools, Madison County Schools, C/O Education Week - Employment Services, Box #301, 4301 Connecticut Avenue, N.W. Suit 432. Madison County School System is an Equal Employment Opportunity employer.
TWO ELEMENTARY TEACHING POSITIONS AVAILABLE

ABOUT THE JOB: Madison County provides teachers with an extensive program of medical, dental, and life insurance benefits. The school system has an outstanding retirement benefits program and provides teachers with job security. Teachers are paid a competitive salary and have excellent classroom facilities. The district insures teachers have adequate class preparation time and state-of-the-art building facilities.

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EVALUATION

Instructions: The purpose of this evaluation is to receive the benefit of your assessment concerning the elementary teaching job described on the position advertisement you have just reviewed. Please respond to the questions indicated below by checking one number for each question that best reflects your assessment of the teaching job described.

1. How would you rate the overall attractiveness of the teaching job described?
   
   
<table>
<thead>
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<th>very unattractive</th>
<th>very attractive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

2. How likely would you be to apply for the teaching job described?

<table>
<thead>
<tr>
<th>very unlikely to apply</th>
<th>very likely to apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

3. If offered, how likely would you be to accept an interview for the teaching described?

<table>
<thead>
<tr>
<th>very unlikely to accept</th>
<th>very likely to accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

4. If offered, how likely would you be to accept the job described:

<table>
<thead>
<tr>
<th>very unlikely to accept</th>
<th>very likely to accept</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
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</table>
### Appendix C

**Table 1**

**Descriptive Statistics for Study Participants**

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<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Age (Years)</td>
<td>136</td>
<td>35.9</td>
<td>7.9</td>
<td>24-55</td>
</tr>
<tr>
<td>Gender (a)</td>
<td>136</td>
<td>1.5</td>
<td>.5</td>
<td>1-2</td>
</tr>
<tr>
<td>Race (b)</td>
<td>136</td>
<td>2.1</td>
<td>.5</td>
<td>1-5</td>
</tr>
<tr>
<td>Teaching Experience (Years)</td>
<td>136</td>
<td>9.1</td>
<td>6.5</td>
<td>1-28</td>
</tr>
<tr>
<td>Educational Level (c)</td>
<td>136</td>
<td>2.3</td>
<td>1.0</td>
<td>1-5</td>
</tr>
<tr>
<td>Number of Times Interviewed</td>
<td>136</td>
<td>4.5</td>
<td>4.0</td>
<td>0-20</td>
</tr>
<tr>
<td>Currently Seeking Teaching Position? (d)</td>
<td>136</td>
<td>1.9</td>
<td>.3</td>
<td>1-2</td>
</tr>
</tbody>
</table>

(a) Scored: Male = 1, Female = 2

(b) Scored: Hispanic = 1, White = 2, Black = 3, Asian = 4, Native American = 5

(c) Scored: BA = 1, BS = 2, MA = 3, MS = 4, PhD = 5

(d) Scored: Yes = 1, No = 2
Appendix D

Table 2

Analysis of Variance for Applicant Reaction by Applicant Sex, Job Attribute Category, and Information Order

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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<th>MS</th>
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<tr>
<td>Sex</td>
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<td>6,022.24</td>
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<td>Attributes</td>
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<td>2,104.60</td>
<td>2,104.60</td>
<td>.08</td>
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<td>Order</td>
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<td>399.18</td>
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<tr>
<td>Sex*Attributes</td>
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<td>1,010,505.36</td>
<td>38.88* (a)</td>
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<td>Sex*Order</td>
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<td>10,151.65</td>
<td>10,151.65</td>
<td>.39</td>
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<tr>
<td>Attributes*Order</td>
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<td>127,063.60</td>
<td>127,063.60</td>
<td>4.89* (b)</td>
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<tr>
<td>Sex<em>Attributes</em>Order</td>
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<td>8.01</td>
<td>8.01</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>128</td>
<td>3,326,552.12</td>
<td>25,988.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>135</td>
<td>4,482,806.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Ratings are based on a multiplicative composite score.

* p < .05

(a) Omega-Squared = .22
(b) Omega-Squared = .02
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Corporate Source: Annual Meeting of National Council of Professors of Educational Administration (NCREA)

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