Personnel Selection

Selection
- Once we have identified a predictor or predictors for a job, the question becomes how to use the predictor for selecting individuals.
  - Job Analysis: suggest predictors to be used,
  - Validation study: tells us whether the predictor is related to performance on the job,
  - The performance appraisal gives us a procedure for assessing performance on the job.

Attracting Applicants
- Amount of compensation (pay)
- Labor market
- Organizational prestige
- Ads
- Recruiters

Selection Paradigm

<table>
<thead>
<tr>
<th>C</th>
<th>False Negatives</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reject</td>
<td></td>
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<tr>
<td>Test</td>
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<tr>
<td></td>
<td>False Positives</td>
<td>C</td>
<td>D</td>
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<tr>
<td>Accept</td>
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<tr>
<td>Successful</td>
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<td>Unsuccessful</td>
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</tbody>
</table>

Scatterplot

Scatterplot

Scatterplot
**Basic Definitions**

- Selection Ratio = \(\frac{A+D}{A+B+C+D}\)
- Base Rate = \(\frac{A+B}{A+B+C+D}\)
- Success Rate = \(\frac{A}{A+D}\)
- Utility = Success Rate – Base Rate
  - Taylor-Russell Utility

**Selection**

- Selection Ratio = \(\frac{\text{number of openings}}{\text{number of applicants}}\)
- Base Rate = percentage of employees who are successful under random selection (or the old selection procedure).
- Success Rate = The proportion of selected individuals who would be successful if the new procedure were to be implemented.

**Utility of a Test**

- The utility of a selection test is the degree to which its use improves the quality of the workforce beyond what would have occurred had the test not been used. Utility has been defined in terms of:
  - The proportion of selected individuals who are successful
  - The average increase in the mean performance score
  - The dollar payoff to the organization from the increased performance

**Possible Mistakes**

- False Negatives – Individuals have the potential to do the job, but are not selected.
- False Positives – Individuals do not have the potential to do the job, but are selected.
- Which error would you like to minimize if you were applying for a job?
- Which error would you like to minimize if you are the personnel manager?
Summary

<table>
<thead>
<tr>
<th></th>
<th>43</th>
<th>85</th>
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<tbody>
<tr>
<td>B</td>
<td></td>
<td>A</td>
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<tr>
<td>99</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>C</td>
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<td>D</td>
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</tbody>
</table>

Utility

\[
SelRatio = \frac{85 + 23}{85 + 43 + 99 + 23} = \frac{108}{250} = 0.432
\]

\[
BRate = \frac{85 + 43}{250} = \frac{128}{250} = 0.512
\]

\[
SuccRate = \frac{85}{85 + 23} = \frac{85}{108} = 0.787
\]

Utility = 0.787 - 0.512 = 0.275

Proportions

\[
P(FalsePositive) = \frac{23}{250} = 0.092
\]

\[
P(FalseNegatives) = \frac{43}{250} = 0.172
\]

Taylor-Russell Tables

- The tables are designed to estimate the percentage of future employees who will be successful on the job if a particular test is used for selection.
- The tables are based on
  - Validity coefficient
  - Selection ratio
  - Base rate

Recruitment Interview

- Employment Interview
  - Primacy Effect- information presented earlier carries more weight
  - Contrast Effect- the interview performance of one applicant may affect the interview score on the next applicant
  - Negative Information- negative information weighs more heavily than positive

More on Interview

- Interviewer-Interviewee Similarity- the more similar the two the higher the score
- Interviewee Appearance- physical attractive candidates have an advantage
- Nonverbal Cues- making eye contact, smiling, & head nodding lead to higher interview scores
Improving Selection

• Interviewer Training
• Structured Interviews
• Realistic Job Previews