

Quality Applicant Ranking Systems in an Online World

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**Jennifer French, Darany and Associates
Kristine Smith, Darany and Associates**

Presentation Agenda

- **Supplemental application question types**
- **Essential characteristics of effective supplemental questions**
- **Supplemental question design approaches**
- **Improving the quality of applicant provided information**

Design Principles

A properly designed applicant ranking procedure:

- is based on job analysis.
- assesses important tasks or requirements needed at the time of hire.
- is supported by reviewable documentation.
- provides equal applicant opportunity.
- uses a structured scoring procedure.
- is reliable and valid.

Types of Supplemental Questions

Forced Choice, includes

- **Multiple choice (standard and multiple-response formats)**
- **True-false**

Text Questions (applicant entry of response)

Standard Multiple Choice Question

How much full-time professional engineering work experience do you have?

- A. I have none of this work experience.
- B. I have some of this experience but less than one (1) year.
- C. I have at least one (1) year but less than two (2) years of this experience.
- D. I have at least two (2) years but less than three (3) years of this experience.
- E. I have three (3) or more years of this experience.

Multiple Response Question

Select *all* of the following programs in which you have at least one (1) year of full-time professional social service work experience.

- A. Adult Mental Health.
- B. Child and Adolescent Mental Health.
- C. Child Welfare.
- D. Developmental Disabilities.
- E. Some other program.
- F. I do not have at least one (1) year of this kind of experience.

True-False Questions

I have communicated accounting issues to peers and upper level management both verbally and in writing.

- A. True.
- B. False.

Yes-No Question

1. Do you possess a current EPA Refrigerant Recycling and Recovery Certificate?
 - A. Yes.
 - B. No.
2. If you answered “yes” to the previous question, enter the Certificate Number and expiration date here. If you answered “no”, enter “None”.

Sample Text Question

If you indicated possession of professional level engineering experience in the previous question, where in the Work Experience portion of your application is this described? Enter here the name(s) of the employer(s) and your job title(s).

Questionable Text Question

If you indicated possession of professional level engineering experience in the previous question, enter here a description of that experience.

Writing Supplemental Questions: Essential Characteristics

- Clarity and Specificity
- Response sets must be:
 - Mutually exclusive
 - All-inclusive

Clarity and Specificity Problems

- How much experience do you have prioritizing multiple, demanding tasks?
- How much experience do you have handling cash, counting money, making change, balancing a till, and accounting for discrepancies at the end of the day?
- Do you have any experience using electric hand tools to perform maintenance and repair tasks?

Response Sets Must Be:

Mutually exclusive: When writing standard multiple choice questions, only one of the response choices can be applicable or true for any applicant's circumstances relative to the topic of the question.

Not Mutually Exclusive

Which one of the following describes your post-high school education in a biological, marine, or environmental science?

- A. Associate's degree.
- B. Bachelor's degree.
- C. Master's degree.
- D. Doctorate degree (Ph.D.).
- E. I have no post high school degrees.

Hyphens: Mutually Exclusive?

How much full-time work experience do you have in the building construction trades?

- A. 0 – 6 months.
- B. 6 – 12 months.
- C. 1 - 2 years.
- D. 2 or more years.

Mutually Exclusive: No Hyphens

How much full-time work experience do you have in the building construction trades?

- A. None.
- B. Some, but less than six (6) months.
- C. At least six (6) months but less than twelve (12) months.
- D. At least one (1) year but less than two (2) years.
- E. Two or more years.

Response Sets Must Be:

All-inclusive: When writing any supplemental question, there must be an applicable, truthful response choice for every applicant, regardless of the applicant's circumstances with regard to the topic of the question.

Not All-inclusive

In what language other than English are you fluent?

- A. Spanish.
- B. Hmong.
- C. Russian.
- D. Vietnamese.
- E. American Sign Language.
- F. Some other language.

Importance of All-inclusiveness

The absence of an appropriate, truthful response for every applicant:

- can make a supplemental question ineffective.
- creates applicant frustration that can result in their abandonment of the application process.
- is especially disruptive when an online system allows questions to be designated as “required”.
- negatively impacts applicant perceptions of an organization as a desirable employer.

All-inclusiveness Example

Did you graduate from your baccalaureate degree program in the top third of your class?

A. Yes.

B. No.

Revised to be all-inclusive:

Did you graduate from your baccalaureate degree program in the top third of your class?

A. Yes.

B. No.

C. I have not earned a baccalaureate degree.

All-inclusive Question

Select *all* of the following types of laboratories in which you have at least one (1) year of full-time work experience as a laboratory aide.

- A. Environmental health laboratory.
- B. Health care laboratory.
- C. Public health laboratory.
- D. Research laboratory.
- E. Some other kind of laboratory.
- F. I do not have at least one (1) year of experience as a laboratory aide.

Escape Option

An escape option is a response choice for applicants for whom none of the other response choices is applicable.

Be more specific than:

- None of the above.
- Not applicable.
- N/A.
- Other
- Something else.

Wording of Escape Options

Add clarity and improve understanding by using wording that connects the escape option to the question asked.

Examples:

- Some other kind of laboratory.
- Some other language.
- I do not have a baccalaureate degree.
- I have no experience performing any of these tasks.

All-inclusive Text Question

If you are currently licensed by the State of California to practice professional nursing, enter your License Number and expiration date in the box below.

If you do not have a current license, type “Not licensed” in the box.

How to Design Effective Supplemental Application Questions

OR

What does the research tell us
about what works?

Some of the Research Findings

- Prior experience and education are valid predictors of job performance.
- Experience is a valid predictor regardless of the way it is measured (up to a point).
- The more specific the experience to the targeted job, the higher the validity.
- Experience defined at the task level is much more valid than measures of tenure (time on the job). (.41 vs. .27)
- Experience measured as the frequency with which a task has been performed is much more valid than time spent (.43 vs. .27).

Approaches for Designing Supplemental Questions

- Minimum Qualifications Approaches
 - Valuing Specific Experience
 - Assessment at the Task Level
- Qualitative Approaches

Minimum Qualifications Approaches

- More of the qualifying experience
- More of the qualifying education
- Minimum qualifications with alternatives
- Qualifications that include substitutions

Experience Beyond the Minimum

How much full-time work experience do you have in the building construction trades?

- 60 A. I have none of this work experience.
- 60 B. I have some of this work experience but less than one (1) year.
- 70. C. I have at least one (1) year but less than two (2) years of this work experience.
- 75 D. I have at least two (2) years but less than three (3) years of this work experience.
- 80 E. I have three (3) or more years of this work experience.

Education Beyond the Minimum

Which one of the following describes the highest level of post-high school education that you have completed in a biological, marine or environmental science?

- 60 A. I have an associate's degree in one of these fields.
- 70 B. I have a baccalaureate degree in one of these fields.
- 75 C. I have a baccalaureate degree AND 30 semester hours of graduate training in one of these fields.
- 80 D. I have a master's degree in one of these fields.
- 85 E. I have a Ph.D. in one of these fields.
- 60 F. I have none of these degrees.

MQ with Alternatives

1. Do you have at least one (1) year of full-time work experience in wildlife or fisheries management, conservation, forestry, or land management?

70 A. Yes.

60 B. No.

2. Do you have at least 30 semester hours of college credit with six (6) hours in a biological, marine, or environmental science?

10 A. Yes.

0 B. No.

MQ with Substitution

Select *all* of the following choices that describe your qualifications for the Engineering Technician position.

- 60 A. I have no subprofessional engineering work experience.
- 60 B. I have some subprofessional engineering work experience but less than one (1) year.
- 65 C. I have at least one (1) year but less than two (2) years of subprofessional engineering work experience.
- 70 D. I have at least two (2) years of subprofessional engineering work experience.
- 5 E. I have at least 30 but less than 60 semester hours of coursework with 6 hours in architecture, construction, drafting, engineering, or math.
- 10 F. I have at least 60 semester hours of coursework with 12 hours in architecture, construction, drafting, engineering, or math.

Defining Experience More Specifically

Categories of Specific Experience

Effective ranking procedures may be based on characteristics shared by the job/position and specific prior work experience. These characteristics may be related to:

- the work performed.
- client populations served.
- work environments.
- bodies of knowledge acquired.

Examples of Characteristics of the Work Performed

Mechanic: Experience in the maintenance and repair of motorized vehicles *that included work on medium and heavy duty trucks*

Registered Nurse: Professional nursing experience that had its emphasis on the *performance of patient education and training activities*

Example Question:

Characteristics of the Work Performed

How much experience do you have in the maintenance and repair of motorized vehicles that included work on medium and heavy duty trucks?

- 0 A. I have none of this work experience.
- 1 B. I have some of this work experience but less than one (1) year.
- 3 C. I have at least one (1) year but less than two (2) years of this work experience.
- 6 D. I have two (2) or more years of this work experience.

Examples of Characteristics of Client Populations

Registered Nurse: Professional nursing experience providing health care services *to children and adolescents with developmental disabilities*

Social Worker: Professional social work experience providing case management services for *a primary client group consisting of elderly adults (over 65)*

Example Question:

Characteristics of Client Population

How much professional nursing experience do you have providing health care services to children and adolescents with developmental disabilities?

- 0 A. I have none of this work experience.
- 1 B. I have some of this work experience but less than one (1) year.
- 2 C. I have at least one (1) year but less than two (2) years of this work experience.
- 4 D. I have two (2) or more years of this work experience.

Examples of Characteristics of the Work Environment

Laboratory Technician: Experience as a laboratory assistant *in an environmental health laboratory*

Registered Nurse: Professional nursing experience providing health care services *in an adult correctional institution*

Example Question:

Characteristics of the Work Environment

How much full-time work experience do you have as a laboratory assistant in an environmental health laboratory?

- 0 A. I have none of this experience.
- 1 B. I have some of this experience but less than six (6) months.
- 2 C. I have at least six (6) months but less than one (1) year of this experience.
- 4 D. I have at least one (1) year but less than two (2) years of this experience.
- 6 E. I have two (2) or more years of this experience.

Examples of Bodies of Knowledge Acquired

Attorney: Experience as a practicing attorney that provided *knowledge of statutes, regulations, and case law related to child welfare and family law*

Medical Billing Technician: Office clerical experience that provided *knowledge of Medicare rules, regulations, and billing processes*

Example Question:

Acquired Body of Knowledge

How much full-time work experience do you have as a practicing attorney that involved working with statutes, regulations, and case law related to child welfare and family law?

- 0 A. I have no experience in these legal areas.
- 1 B. I have some experience in these legal areas but less than six (6) months.
- 3 C. I have at least six (6) months but less than one (1) year of experience in these legal areas.
- 6 D. I have at least one (1) year but less than two (2) years of experience in these legal areas.
- 9 E. I have two (2) or more years of experience in these legal areas.

Assessment at the Task Level

Several Advantages:

- Task level measures of experience are more valid than measures of tenure.
- Appropriate response sets include measures of frequency of task performance.
- Response sets can be developed that tap into qualitative aspects of experience.

Task Performance: Laboratory Assistant

1. Does your work experience include sterilizing sample bottles using an autoclave?

- 1 A. Yes.
- 0 B. No.

2. Does your work experience include filtering liquids using a vacuum pump?

- 1 A. Yes.
- 0 B. No.

:

etc.

Multiple Response Task Level Question

Select *all* of the following that describe laboratory tasks that you have performed as part of your laboratory work experience.

- 1 A. Filtered liquids using a vacuum pump.
- 1 B. Sterilized sample bottles using an autoclave.
- 1 C. Used a pipette to transfer fluids.
- 1 D. Performed dilution procedures on specimen samples.
- 1 E. Mixed chemicals together to prepare solutions and reagents.
- :
- 0 L. I have never performed any of these tasks.

Frequency of Task Performance

In your current or most recent laboratory work experience, approximately how often did you mix chemicals together to prepare solutions and reagents?

- 5 A. Several times a day.
- 4 B. Once a day.
- 2 C. Once a week.
- 1 D. Once a month.
- 0 E. Never.

Frequency of Task Performance

In your current or most recent clerical or office work experience, how often did you use a PC to prepare written documents such as correspondence, memoranda, and reports?

- 6 A. Constantly.
- 4 B. Frequently.
- 2 C. Sometimes.
- 1 D. Seldom.
- 0 E. Never.

Qualitative Response Set Example: Facility Maintenance Worker

- **Minimum qualifications:** requires one year of experience in general building maintenance.
- **Job analysis findings:** success on the job requires prior maintenance experience that included performance of tasks in the areas of plumbing, electrical, and heating/air conditioning.

Facility Maintenance Worker: Question #1

Which one of the following describes your work experience maintaining and repairing plumbing fixtures and equipment, such as faucets, water heaters, and water lines?

- 0 A. I have no experience performing these tasks.
- 1 B. I have assisted others in their performance of these tasks.
- 2 C. I have performed these tasks under close supervision.
- 4 D. I have performed these tasks independently under routine supervision.
- 6 E. I have directed and trained others in the performance of these tasks.

Facility Maintenance Worker: Question #2

Which one of the following describes your work experience maintaining, troubleshooting, and making minor repairs to *electrical fixtures, equipment, and wiring systems*?

Facility Maintenance Worker: Question #3

Which one of the following describes your work experience maintaining and making minor repairs to *heating, ventilation, and air conditioning equipment in buildings*?

Another Task Performance Response Set

Which one of the following describes your training, education, and work experience in ... [specific tasks]?

- A. I have no training, education, or experience related to these tasks.
- B. I have training or education related to these tasks, but I have not yet performed these tasks on the job.
- C. I have performed these tasks on the job under close supervision from a supervisor or a senior employee.
- D. I have independently performed these tasks as a regular part of the job.
- E. In addition to independently performing these tasks, I am normally consulted by others seeking assistance in performing them.

Improving the Quality of Applicant Provided Information

Suggestions for Improving the Quality of Applicant Information

- Take care in writing questions
- Ask verifiable questions
- Obtain all of the information needed for verification
- Build expectations of verification
- Warn of the consequences of providing false information

Writing Supplemental Questions with Care

- Keep reading level and vocabulary at an appropriate level for the job
- Use task performance questions in multiple response, or “checklist” format for jobs with limited reading and analytical skill demands
- Strive for clarity and understandability
- Take extra steps to ensure clarity: use underlining, **bold**, ALL CAPITALS, and *italics* to add emphasis to critical components of questions

Verification of Information

Procedures for verifying applicant reported information must be established and followed.

Inclusion of ranking procedure content in the hiring interview allows face-to-face verification. Additional benefits include:

- permits obtaining detailed information about experience, task performance, and other content
- contributes to structured interviewing

Questions and Comments

Additional Information and Resources:

- *References List (at end of handout)*
- *Darany and Associates:*
 - Jennifer French, (928) 757-7783
 - Kristine Smith, (909) 798-4475