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# Enhancing Job-Relatedness through the Assessment Review Process

Ilene F. Gast

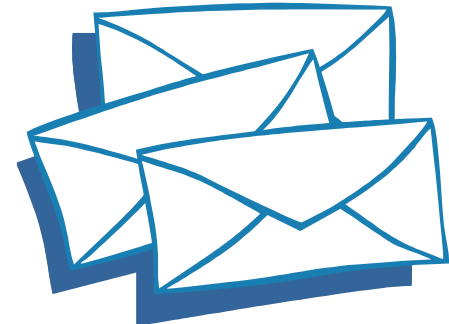
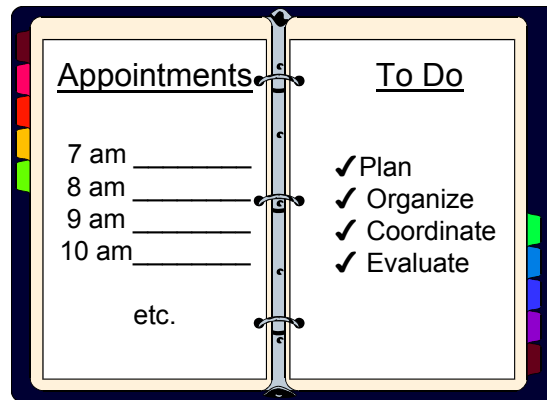
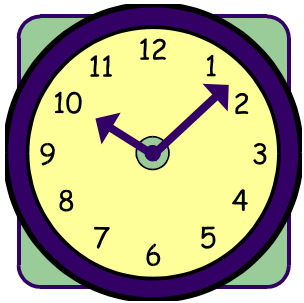
U.S. Immigration and Naturalization Service

*Symposium: Developing Defensible Written Test Questions:  
Art, Science, and Some Guidelines*

*26th Annual IPMAAC Conference on Personnel Assessment July 3, 2002*



# The In-Basket



# The Competency-Based Promotional Assessments

## *Assessment Strategy*

<b>Competency Area</b>	<b>Decision Making</b>	<b>In-Basket</b>	<b>Writing</b>	<b>Job Experience Measure</b>
Thinking Skills	X			
Administrative Skills		X		
Writing Skills			X	
Technical Skills				X

# Overview

## *Assembling the In-Basket*

- Collect Source Materials from Incumbents
- Develop In-Basket Scenario and Documents
- Review In-Basket/Generate Responses (SMEs)
- Write Items per Test Plan

## *Refining the In-Basket*

- Review Technical Adequacy
- Review Job-Relatedness and Fidelity (SMEs)
- Assemble Final Assessment
- Review for Policy and Sensitivity (R&D Management)
- Prepare for Publication

# Collecting Source Materials

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- **Visit Representative Sites**
  - » Tour facilities
  - » Meet with managers
  - » Conduct interviews with job incumbents
    - Learn about a “typical day”
    - Collect critical incidents
    - Collect representative documents

# Developing the Scenario and Documents

- **The Document Pool and Scenario Should:**

- » Present a variety of problems and issues
- » Represent job duties and critical tasks
  - Each document requires performance of least one critical task
- » Represent the full range of work products
  - Include various formats (notes, memos, letters, e-mails, etc.)
- » Elicit all identified competencies
  - Each individual document should be "competency rich"
  - The document pool should include all competencies and subcompetencies



# Sample Document Map

Doc.	Content	Format	From	Duty
1	Welcome	Note	Meg Lindstrom	
2	Request to Approve Funds	Phone Msg.	SBPA Markowitz	Budget/Financial
3	Information Leak	Note	SBPA Markowitz	PR/Communications.
4	Surplus Equipment	E-mail	ACPA Cook	Resource Mgmt.
5	Morale Problem	Memo	SBPA Quesada	Personnel Mgmt.
6	Coordination of Joint Operation	E-mail	RAC Kluski, U.S. Customs	Operations
7	Visit from HQ	E-mail	ACPA Cook	Resource Mgmt.
8	Detail of Agent Tyrol	Memo	Commander, BORTAC	Personnel Mgmt.
9	Supervisor Has New Job	Memo	HQHRD	Personnel Mgmt.
10	Request to Appear on TV	Letter	KTAK-TV	PR/Comm.
11	Harassment Claim	Memo	DEO Gatos	Personnel Mgmt.
12	Fuel Tank Leak	Note & Memo	SBPA Tyrol	Resource Mgmt.
13	Extended Leave Request	Memo	SBPA Quesada	Operations
14	Notification of CPR Training	E-mail	Sector Training Officer	Personnel Mgmt.

# Reviewing the Scenario and Documents

- **SMEs Review the Materials for Clarity, Format, Technical Accuracy, and Job-Relatedness**
  - » Respond to in-basket materials as “candidates”
  - » Review materials
    - Individual review
    - Group consensus
- **SMEs Define the Range of Responses**
  - » What do I with the document after reading it? (*Managing & Organizing Info*)
  - » What decisions need to be made? (*Decision-Making/Problem Solving*)
  - » What resources are needed to resolve this issue? (*Planning & Evaluating*)
  - » What priority do I give this issue, relative to others? (*Self-Management*)



# Writing the Multiple-Choice Items

- **Develop a Competency-Based Taxonomy**
  - » Examine the competency definition
  - » Break the competency definition into component behaviors (*subcompetencies*)
  - » Establish generic behavioral benchmarks for each subcompetency
    - substandard
    - acceptable
    - superior

# Example: Subcompetency and Benchmarks from the Competency-Based Taxonomy

***Decision Making/Problem Solving*** - **Identifies problems**; gathers, interprets, and evaluates information to determine its accuracy and relevance; generates and evaluates alternatives; makes sound and well-informed decisions; and commits to action to accomplish organizational goals

Confidential test material. Benchmark not included.

# Writing the Multiple-Choice Items

- **Prepare an Item Development Plan**

- » Ensures competency coverage
- » Specifies the target number of items needed per competency

## SAMPLE PLAN

<b>Competency</b>	<b><u># of Items</u><sup>1</sup></b>	
	<b>Draft</b>	<b>Final</b>
Decision Making	25	20
Planning and Evaluating	25	20
Managing Information	25	20
Self-Management	<u>25</u>	<u>20</u>
<b>Total</b>	<b>100</b>	<b>80</b>

<sup>1</sup>Assumes that 2 forms will be developed and that there will be about 40-50% overlap between the forms.

# Writing the Multiple-Choice Items

- **Train Item Writers**

- » To use the competency-based taxonomy
- » To adapt SME responses
- » To follow item development guidelines (checklist)

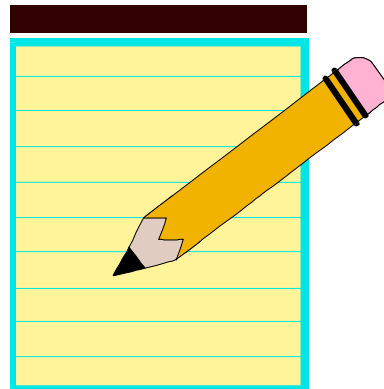
- **Prepare Items and Documentation**

- » Generate at least one item per document
- » Prepare item documentation
- » Revise items and documents as needed
  - Revise document to make items plausible
  - Eliminate document if revision fails to produce items

# Example

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## *Writing a Decision-Making Item*



# Example: In-Basket Document #3 and Possible Responses

## FROM THE DESK OF SAM MARKOWITZ

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CPA Cook called me last night from Sector Headquarters. She tried to reach you until about 11:00 p.m., but had not yet returned from your trip. She had just received a phone call from Dick Grady. He hosts the all-night talk show on KNWS-Talk Radio. Dick Grady invited her to appear to respond to his “digs” and then take questions from the public. CPA Cook said that **Dick Grady appears to know much more about our plans for Operation RATTRACK than we have released to the public.** Specifically, he asked CPA Cook to be prepared to comment on our strategy for this week’s joint operation with DEA.

CPA Cook told Dick Grady that INS had no comment and asked him where he obtained this information. He told her that he cannot reveal his sources. She asked me to pass this information on to you immediately and to ask you to handle it. I will be on location for the remainder of the day.

# Example: Multiple-choice Item for Decision-Making

In Document 3, SBPA Markowitz informs you that a radio talk show intends to ask CPA Cook about Operation RATTRACK. What is the **most critical issue** raised in this document?

- A) Dick Grady's invitation to CPA Cook
- B) SBPA Markowitz's whereabouts for the remainder of the day
- C) CPA Cook's inability to reach you last night
- \* **D) Dick Grady's knowledge about Operation RATTRACK**
- E) Dick Grady's refusal to divulge the source of his knowledge about Operation RATTRACK

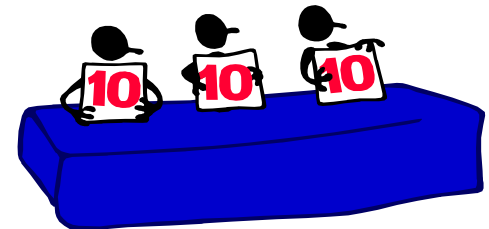
# Reviewing Technical Adequacy

- **INS Psychologists Review Items for:**
  - » Conformance to taxonomy
  - » Format, grammar, and syntax
  - » Accuracy of items and distractors
  - » Potential “red flags”
    - Policy issues
    - Job knowledge issues
  - » Inconsistencies across items
    - Names of characters
    - Names of places
    - Dates



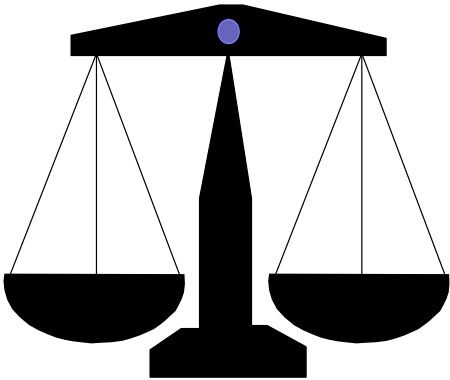
# Reviewing Job-Relatedness & Fidelity

- **SMEs Evaluate the Job-Relatedness and Accuracy of the Scenario and Documents**
- **SMEs Review, Evaluate, and Revise the Multiple-Choice Items and Documentation**
  - » SMEs rate each item independently for
    - Job-relatedness and technical accuracy
    - Clarity and conciseness
    - Plausibility of response options
    - Reliance on localized knowledge or regional policies
    - Scoring of response options
  - » SMEs discuss items, raise problems, suggest revisions to stems, distractors, and documentation
  - » SMEs reach consensus on the disposition each item



# Assembling the Final Assessment

## *Developing Alternate Forms: A True Balancing Act*



- Both forms must follow the test plan
- Each document must be addressed by at least one multiple-choice question
- One question cannot imply the answer to other questions
- Response options should be equally distributed
  - » Each option (A,B,C,D,E) will comprise about 20% of the total
- Response options should be appropriately sequenced
  - » no more than 3 “A’s,” “B’s,” “C’s,” etc. in a row

# Reviewing for Policy and Sensitivity Issues

- **R&D Managers Conduct Final Review**
  - » Examine introductory materials and documents
    - Sensitivity
      - Conformance to INS-wide policy
      - Potential bias
    - Grammar, syntax, clarity
  - » Review and edit multiple-choice items
    - Correspondence to competency
    - Independence of response options
    - Grammar, syntax, clarity
  - » Review and edit official scoring key

# Preparing for Publication

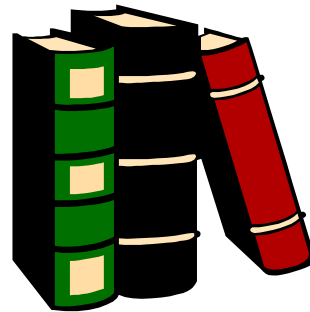
## *The Formal Proof: The Ultimate Review*

- Final Quality Review
- Common Mistakes/Inconsistencies
  - » Names of characters
  - » Names of places
  - » Dates
  - » Document format elements



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# *Reference Materials*



# The In-Basket Competencies

## *Administrative Skills*

- **Decision-Making/Problem Solving**
  - » Identifies problems; gathers, interprets, and evaluates information to determine its accuracy and relevance; generates and evaluates alternatives; makes sound and well-informed decisions; and commits to action to accomplish organizational goals
- **Planning and Evaluating**
  - » Organizes work, sets priorities, and determines resource requirements; determines objectives and strategies to achieve them; monitors and evaluates progress against goals
- **Managing and Organizing Information**
  - » Identifies need for information; determines its importance and accuracy, and communicates it by a variety of methods
- **Self-Management**
  - » Shows initiative; sets well-defined and realistic personal goals; monitors progress and is motivated to achieve; manages own time and deals with stress effectively

# Sample Competency-Based Item Stems

## *Item stems follow the competency-based taxonomy*

### ● **Problem Solving and Decision Making**

- » What is the most critical issue raised in this document?
- » What action would you be MOST/LEAST likely to take in response to this issue?

### ● **Planning and Evaluating**

- » What specific steps would you take to resolve the issue in this document?
- » Which of these steps would you take first? . . .last?
- » What indicators would provide the strongest evidence you have dealt with the situation successfully ?

### ● **Managing and Organizing Information**

- » Who else needs the information presented in this document?
- » What should you do with this document once you have read it?

### ● **Self-Management**

- » What priority would you assign to each issue presented in the in-basket?
- » When must each situation be handled?

# Item Development Checklist

## The ITEM as a whole should:

- ✓ clearly reflect a competency and subcompetency
- ✓ focus on a single problem
  - ◆ the solution can involve several steps but only one question should be asked
- ✓ be totally independent of all other items for its correct answer
- ✓ be free of cultural, gender, or other biases
  - ◆ the sentence structure and vocabulary should not present any unnecessary challenge to comprehension
  - ◆ unnecessary wording and details should be eliminated from both the stem and alternatives
- ✓ be printed entirely on one page

## The STEM should:

- ✓ be self contained
  - ◆ the candidate should be able to answer the question without the alternatives
- ✓ ask a question that has a definite answer
- ✓ be clearly worded and free of ambiguity
- ✓ be free of irrelevant unnecessary detail
- ✓ be grammatically correct within itself and in its relationship to each of the alternatives
- ✓ not provide any grammatical clues to any alternative



# Item Development Checklist (Continued)

Each **RESPONSE OPTION** should

- ✓ be appropriate to the question asked or implied by the stem
  - ◆ Do not include irrelevant options because it is too difficult to come up with a fifth option
- ✓ be grammatically consistent with the stem and parallel in form
- ✓ be independent; response options should not overlap with other response options
- ✓ be stated as briefly and simply as possible
- ✓ be plausible

In addition, when preparing **RESPONSE OPTIONS**:

- ✓ avoid the use of trickery
- ✓ always use the same number of alternatives
- ✓ avoid stating correct answer in greater length (or keep all alternatives as close to the same length as possible)
- ✓ Place words that are common to all the alternatives in the stem
- ✓ avoid absolute terms like “always” and “never”
- ✓ refrain from using “all of the above” or “none of the above”

# Item Development Checklist (Continued)

When developing the **ITEM KEY**:

- ✓ Make certain that the intended answer is only the only correct answer or clearly the best answer
- ✓ Vary the distribution of keyed items in a random manner
- ✓ Arrange response options in ascending or descending order
- ✓ Make sure that every item is independent of every other item
- ✓ Assign the same number of points to each item

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# For More Information . . .



## **U.S. Department of Justice** **Immigration and Naturalization Service**

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**Ilene F. Gast, Ph.D.**  
Senior Research Psychologist

HRD-R&D  
800 K Street, NW  
Room 5000  
Washington, DC 20536

Telephone: (202) 305-0590  
Fax: (202) 305-0590  
E-Mail: [Ilene.F.Gast@usdoj.gov](mailto:Ilene.F.Gast@usdoj.gov)