

6/24/2003 IPMAAC Conference Session

Development and Use of a Practical Training Curriculum for Personnel Assessment Professionals

Training Objectives, Content Outlines Course Schedules and Agenda

IPMAAC Seminars

- Examination Planning (Planning Hiring and Promotional Assessments)
- Ratings of Training and Experience (T&Es)
- Oral Examinations (Structured Employment and Promotion Interviews)

MAPAC Courses

- Job Analysis for Content Validation
- Item Writing for Selection Specialists
- Essential Statistics for Selection Specialists

Seminar or Course	Pages
Job Analysis for Content Validation	1 - 7
Examination Planning	8 - 12
Ratings of Training and Experience	13 - 19
Oral Examinations	20 - 24
Item Writing for Selection Specialists	25 - 30
Essential Statistics for Selection Specialists	31 - 37

Course Objectives

MAPAC - Job Analysis for Content Validation

Upon completion of the course, participants will:

- Understand the purposes and uses of job analysis
- Be aware of federal legal requirements for conducting an adequate job analysis
- Be aware of what information should be in a job analysis report
- Be aware of some useful published reference materials on job analysis
- Understand how job analysis can be used to produce information needed for a variety of personnel purposes
- Know sources of background information to use in conducting job analysis
- Be aware of how to select and work with job experts
- Know the uses, advantages and disadvantages of a variety of job analysis data collection techniques
- Be aware of the need to prepare a sampling plan
- Be familiar with personnel terminology used to describe work
- Be able to write adequate task statements
- Be able to derive knowledge, skill and ability requirements (KSAs) from tasks
- Be aware of methods and procedures for collecting and analyzing ratings on tasks and KSAs
- Be aware of verification and documentation requirements for Job Analysis
- Be aware of tools available to assist with Job Analysis as well as reference materials used in the development of this training course

Summary Content Outline

© MAPAC Job Analysis for Content Validation

- Section I: *Introduction*
Objectives
Agenda
- Section II: *Overview of Job Analysis*
Objectives
What is Job Analysis
Job Analysis General Model
Definitions
- Section III: *Legal Considerations and Case Studies*
Objective
Relevant Legislation
Uniform Guidelines on Employee Selection Procedures
Principles for the Validation and use of Personnel Selection Procedures
Standards for Educational and Psychological Tests
Relevant Legal Findings
Other Relevant Legal Cases
What is adequate Job Analysis Information
- Section IV: *Methods of Job Analysis for Content Validation*
Objectives
Current Job Analysis Methods
Competency Modeling
Similarities and Dissimilarities of the Methods
Advantages and Disadvantages of the Methods
- Section V: *Collecting Job Information*
Objectives
Sources of Job Information
Job Experts (SME's)
Data Collection Techniques
Critical Incident Examples
Some Considerations in Selecting Data Collection Techniques
Steps in Conducting a Tryout of Job Analysis Data Collection Techniques
Types of Samples
Sample Size
Sampling Fact-Finding Techniques and Job Analysis Costs

Section VI: *Planning a Job Analysis*
Objectives
Planning a Job Analysis

Section VII: *Describing Work*
Objectives
Terms used to Describe work
Exercise
Task Statement Workshop
Summary and Guidelines: What is an adequate task statement?
Task Statement Examples
Task Writing Workshop Notes Page
Reasons for Rating Tasks
Examples of Task Data Collected through the Use of Rating Scales
Sample Task Rating Scales
Special Purpose Task Rating Scales
Comparison of Two Rating Scales
Types of Rating Scale Intervals
Sample List of Evaluative Words
Some Characteristics of Good & Bad Rating Scales
Rating Errors & How to Avoid Them
Example of Job Analysis Questionnaire Instructions & Rating Scales
Examples of how tasks can be rated
Task Rating Exercise Rating Scales
Rating Scales
Task Rating Exercise

Section VIII: *Deriving Knowledge, Skill and Ability (KSA) Requirements*
KSA's-Definition of Terms
Notes on Inter-Relationship of Types of KSA's and the
What is an Adequate KSA?
Some KSA Derivation Methods and References
Sample Tasks and KSA's
KSA Derivation Guidelines Logical Analysis of Tasks
Examples of KSA's
KSA Derivation Workshop

Section IX: *Verification and Documentation of Job Analysis*

Section X: *Concluding Exercise, References and Course Evaluation*

Agenda and Detailed Content Outline

© MAPAC Job Analysis for Content Validation

DAY ONE – 8:30 am – 4:30 pm

30 min. I. Introduction and Overview

- Introductions
- Overall course objectives
- Agenda

10-20 min. II. Overview of Job Analysis

- What is Job Analysis?
- A general model of Job Analysis for Content Validation

40 min. III. Legal Considerations and Case Studies:

Key Provisions

- Uniform Guidelines
- APA Standards
- Principles for the Validation and Use of Personnel Selection Procedures

Legal Case Studies

- Recent legal decisions and findings related to Job Analysis
- What is professional (based upon what's legal)?

BREAK

1 hour IV. Methods of Job Analysis for content validation

- **Role of Job Analysis in the Development of Content Valid Examinations**
- **Some current methods of Job Analysis and their relation to the general model**
 - Job Elements
 - Task Analysis
 - Functional Job Analysis
 - Critical Incidents
 - Survey Techniques
 - O*NET
 - WRIPAC methodology
 - Abilities Analysis and Fleischmann's Job Analysis Survey
 - Multi-purpose Job Analysis
- **Competency Modeling**
- **Similarities and dissimilarities among the methods**
- **Advantages and disadvantages of the methods**

30 min.

EXERCISE: Break into small groups. Each group to provide examples of job analysis methods from their respective jurisdictions. How do their methods meet the criteria outlined in the morning session?

LUNCH

2 hours

V. Collecting Job Information

- **Methods of Data Collection (examples, advantages, disadvantages, when to use)**
 - Individual Interviews
 - Group Interviews
 - Supervisory Interviews
 - Observation
 - Participant Logs
 - Questionnaires and Checklists
 - Critical Incidents
- **Pretest of Job Analysis Data Collection Method**
- **Selecting Study Sample**
- **Use of Job Experts (care and feeding of SME's)**

20 min.

VI. Planning a Job Analysis

- **Defining the Target "Job"**
- **Employee Population**
- **Clarifying Purpose**
- **Cost Factors**
- **The Client**

40 min

EXERCISE: Job Analysis Planning: Case Studies

DAY TWO- 8:30 am – 4:30 pm

8:30-12:00

VII. Describing Work: Task Workshop

- **Introduction**
- **Writing Task Statements**
 - Definition of Terms
 - What is an adequate Task Statement?
 - Sample Task Statements

LUNCH

1:00-4:30

- Workshop – Task Writing
- Group Review of Task Statements
- Use of Rating Scales
- Analysis of Rating Data

DAY THREE- 8:30 am – 4:30 pm

8:30-12:00

VIII. Deriving Knowledge, Skill and Ability (KSA) Requirements:

KSA Workshop

- Definition of Terms
- What is an adequate KSA?
- How to derive KSA's
- Sample KSA's
- Workshop – KSA Derivation

LUNCH

1:00-4:30

- Group Review of KSA's
- Use of Linkage Forms and Rating Scales
- Analysis of Rating Data

IX. Verification and Documentation of Job Analysis Results

- **Verification**
 - Purpose
 - Procedures
 - Outcome
 - Need
- **Documentation: Purposes and Procedures**
 - Reasons for Documentation
 - What information should be documented?
 - Examples of documentation procedures – provide examples of forms, technical reports and job studies (from MAPAC members)

X. Concluding Exercise, References, and Course Evaluation

CONCLUDING EXERCISE:

Break into small groups to revisit exercise from Day One. Ask each group to expand on what they did earlier in terms of matching guidelines and strategies to their respective jurisdictions. Specifically, what implementation plans or ideas will they offer upon returning to their jurisdictions.

Seminar Objectives

IPMAAC EXAMINATION PLANNING SEMINAR (Planning Hiring and Promotional Assessments)

- To provide an overview of personnel systems, personnel assessment, and how examination planning relates to and supports the personnel system.
- To make participants aware of approaches to assess the need for an examination program and determine the relative priorities of selection programs.
- To help participants address and consider efficiency and productivity in examination planning, and to provide examples of efficient procedures.
- To identify the job analysis and other data needed for examination planning and help participants assess the adequacy of job analysis data for examination planning.
- To identify and describe various examination modes and describe what each is best capable of measuring.
- To identify sources and availability of examination materials.
- To provide data on and assist participants in evaluating the costs and effectiveness of examination options.
- To help participants in making decisions on what should be measured in an examination program and how to measure it.
- To review considerations and approaches for using the measures decided upon (e.g., when and how to use them, sequence, administration, scoring, use of passing scores, weighting and combining measures, method of use, etc.).
- To help participants document the examination plan and meet legal requirements.
- To assist participants in planning for test development.

**SUMMARY OUTLINE & SCHEDULE
IPMAAC - EXAMINATION PLANNING SEMINAR**

<u>TOPIC</u>	<u>DAY and TIME</u>	
I. Introduction and Course Overview	DAY 1	8:30 am - 9:15 am
II. Personnel Systems, Personnel Assessment, and Examination Planning	DAY 1	9:15 am - 11:30 am
III. Determining the adequacy of job analysis information	DAY 1	11:30 am - 3:30 pm
IV. Deciding "What to Measure" in the selection process and "How to Measure"		
A. What to Measure	DAY 1	3:30 am - 4:30 pm
B.1 - 2 How to Measure	DAY 2	8:30 am - 9:30 am
B.3 Alternative Measurement Methods	DAY 2	9:30 am - 4:30 pm
B.4 Information Sources	DAY 3	8:30 am - 9:30 am
C. On Making the Decision	DAY 3	9:30 am - 10:30 am
V. Documenting the Examination Plan and Planning for Test Development	DAY 3	11:00 am - 12:00 pm 1:00 pm - 2:00 pm
VI. Case Studies	DAY 3	2:00 pm - 4:15 pm
VII. Seminar Evaluation and Feedback	DAY 3	4:15 pm - 4:30 pm

8:30 am - 4:30 pm daily

One hour for lunch

Morning and afternoon breaks will be held at convenient times, depending on the topic and our progress

DETAILED CONTENT OUTLINE

IPMAAC - EXAMINATION PLANNING SEMINAR (Planning Hiring and Promotion Assessments)

- I. Introduction and Course Overview
 - A. Information on Instructor and Participants
 - B. Facilities, Schedule
 - C. Review of Objectives and Content Outline

- II. Personnel System, Personnel Assessment and Examination Planning
 - A. Overview of the Personnel Assessment Process
 - B. Examination Planning: What Is It? How Does It Fit In?
 - C. Determining the Need for Selection Programs; Data Needed
 - D. Determining Needs and Priorities for Selection Programs, and Allocating Resources
 - E. Determining the Kind of Selection Process Needed
 - 1. Results Desired
 - 2. Considerations and Constraints
 - F. Decisions
 - 1. What to Measure
 - 2. How to Measure
 - G. Efficiency and Productivity in the Examination Planning Process
 - 1. Efficient vs. More Extensive Examining Approaches
 - 2. Review of Examples

- III. Determining the Adequacy of Job Analysis Information
 - A. What is Adequate Job Analysis Information for Examination Planning?
 - B. Case Studies: Identifying and Correcting Inadequacies

- IV. Deciding “What to Measure” in the Selection Process and “How to Measure” It
 - A. Considerations in Deciding “What to Measure”
 - 1. Job Analysis Results
 - 2. Time/Cost/Resource Considerations
 - 3. Validation Strategy
 - 4. What Can Be Measured and What Is Difficult or Impossible to Measure Adequately
 - 5. Number and Variety of Test Modes

- B. Considerations in Deciding “How to Measure”
 - 1. Degree of Precision Needed
 - 2. Job Relatedness and Validity
 - 3. Alternative Measurement Methods and Methods of Use
(characteristics; strengths and weaknesses; advantages and disadvantages; cost and efficiency; administration time; expertise needed to develop a measure; research evidence on the effectiveness of each method; knowledge, skills, abilities, and other characteristics appropriate to each method)
 - a. Minimum Experience and Training Requirements
 - b. Ratings of Training and Experience
 - c. Bio-Data
 - d. Written Tests (Multiple Choice, True/False, Short Answer, Essay)
 - e. Oral Examinations
 - f. Assessment Centers
 - g. Performance Tests
 - h. Physical and Medical Examinations
 - i. Personality Tests
 - j. Interest Tests
 - k. Performance Appraisal
 - l. Probationary Period
 - m. Review of Alternative Assessment Methods
 - 4. Information about Various Measurement Approaches for the Occupation and Availability and Sources of Examination Materials
 - a. Where to Find Research Information on Various measures for the Occupation
 - b. How to Evaluate Research
 - c. How to Find Out About Commercially Available Tests and Test Services, Test Exchange/Cooperative Test Development
 - d. How to Evaluate Existing Examination Materials
 - e. Discussion of Commercial vs. Custom-Made Tests
- C. On Making the Decision: What and How to Measure
 - 1. Situational Considerations
 - a. Data Available on Applicants (applicant pool, size of pool, base rate)
 - b. Time/Resources Available -- Staff, Facilities and Equipment, Cost and Utility Differences
 - c. Materials Available
 - d. Selection Ratio Expected
 - e. Security Problems and Retesting Needs
 - f. Preferences of the Employee and Applicant

2. Measurement Considerations
 - a. Validity and Job Relatedness
 - b. Reliability
 - c. Fairness Issues and Concerns
 - d. Most Effective Combination of Measurement Techniques
 - e. How the Measure will be used
 - 1) Sequencing Measures (multiple hurdles and compensatory approaches)
 - 2) Administration, Time Limits and Scoring
 - 3) Setting Passing Scores
 - 4) Method of Use
 - 5) Weighting and Combining Measures
 - 6) Retesting
3. Making the Decision: What and How to Measure

V. Documenting the Examination Plan and Planning for Test Development

- A. Legal Requirements in Examination Plan Documentation
- B. Content and Format of the Examination Plan
 1. Review of Information to be Documented in an Examination Plan Based on the Content Validity Model
 2. Review of Sample Examination Plan and Formats
 3. Review and Critique of Sample Examination Plan and Format
- C. Planning the Content and Development of Each Measure
 1. Elements of a Test Content and Test Development Plan for Each Measure
 2. Use of Subject Matter Experts and Assessment Specialists

VI. Case Studies – Application of Examination Planning to real and practical problems

- A. Food Service Worker
- B. Conservation Officer

VII. Seminar Evaluation and Feedback

Objectives

IPMAAC Ratings of Training and Experience (T&E) Seminar

At the completion of this seminar, participants should be aware of, know, or be able to do the items listed below under the headings for each section of this training.

Section I. Introduction and Seminar Overview

Participants will:

- become familiar with the objectives and content of the training, and begin to share experiences and solutions related to T&E examinations
- begin to build a helping relationship with the instructors and other class members

Section II. Overview of Rating of Training and Experience Methods

Participants will:

- become familiar with personnel selection and its relationship to other HR functions
- become familiar with key concepts, terms and definitions
- become familiar with different T&E rating methods
- know the basis assumptions behind T&Es
- know the findings of research on the validity and reliability of T&E methods, and how T&E validity compares to that of other assessment methods
- become aware of the use of T&Es, and the views of a sample of users
- be aware of relevant references on T&Es

Section III. Minimum Qualifications (MQ) Requirements

Participants will:

- become aware of the forms of role of MQ requirements
- be aware of the proper use of MQs in the selection process and the importance and effects of MQs
- learn of resources to assist with MQ development
- become aware of methods for developing Minimum Qualifications Requirements
- learn how to develop valid Minimum Qualifications Requirements
- become aware of factors to consider and emerging trends

Section IV. Improved Point Method

Participants will:

- become aware of procedures for developing Improved Point Method T&Es
- know the positive and negative features of this T&E method
- know how to further refine the Improved Point Method
- obtain guidance on when to use this method

Section V. Grouping Method T&Es and Case Study Materials

Participants will:

- know procedures for development and documentation of Grouping T&Es
- be able to develop a Grouping Method T&E
- know the results of research on the Grouping Method
- know the positive and negative features of this T&E method
- know how to further refine the Grouping Method
- obtain guidance on when to use this method

Section VI. Behavior Consistency Method

Participants will:

- know procedures for development and documentation of Behavioral Consistency T&Es
- be able to develop a Behavior Consistency T&E
- know how to design an Application Supplement
- know alternative methods for Rating Behavioral Consistency T&Es
- know the results of research on the Behavioral Consistency Method
- know the positive and negative features of this T&E method
- know when to use and when not to use this method
- know how to obtain and scale achievement examples for use with this method

Section VII. Self-Report and Self-Rating Methods

Participants will:

- know the types of Self-Report and Self-Rating T&E Methods
- know procedures for development and documentation of this T&E method
- be able to develop Self-Report and Self-Rating T&Es, including design of a supplemental application form
- know the results of research on these T&E methods
- know the positive and negative features of these T&E methods
- obtain guidance on when to use and when not to use these methods, including when to use a task based method and when to use a KSA based method
- know how to develop scoring procedures for these T&E methods

Section VIII. Resource Allocation Strategies, and Determining When T&Es are Appropriate

Participants will:

- be aware of key considerations in allocating resources and determining the type of test to use for assessment
- know when T&Es should/could be used, and be able to compare the T&E methods on a variety of criteria (e.g., validity, reliability, ease of development and scoring, difficulty for applicants)
- be able to select the appropriate T&E method in different situations and for different job types

Section IX. Remaining Topics and Course Evaluation

Participants will:

- obtain information on and discuss the remaining topics to be covered, based on the information participants requested on the first morning of the seminar
- evaluate the seminar, and provide feedback to allow future refinement of the seminar

General Content Outline and Schedule

IPMAAC RATING OF TRAINING AND EXPERIENCE (T&E) SEMINAR

Section	Topic	Day & approximate length
I.	Introduction and Seminar Overview	Day 1 am (1 hour)
II.	Overview of T&E Methods	Day 1 am (2 ¼ hours)
III.	Minimum Qualification Requirements	Day 1 pm (3 ¼ hours)
IV.	Improved Point Method	Day 2 am (1 hour)
V.	Grouping Method and Case Study Materials	Day 2 am (2 ¼ hours)
VI.	Behavioral Consistency Method	Day 2 pm (3 ¼ hours)
VII.	Self-Report and Self-Rating Methods	Day 3 am (3 ¼ hours)
VIII.	Resource Allocation Strategies, and Determining When T&Es are Appropriate	Day 3 pm (2 hours)
IX.	Other Topics of Interest to participants, Course Evaluation, and Feedback	Day 3 pm (1 hour)

Typical Daily Schedule

8:30 am to 4:30 pm

Lunch – typically one hour

Lunch and breaks scheduled at convenient times,
depending on the topic and our progress

Detailed Content Outline

IPMAAC Rating of Training and Experience (T&E) Seminar

I. Introductions and Seminar Overview

- a. Instructor introductions
- b. Participant Introductions
- c. Review of Seminar Outline, Schedule, and Objectives

II. Overview of T&E Methods

- a. Overview of Personnel Selection
- b. Relationship to other HR functions
- c. Concepts, Definitions and Terms
- d. Review of T&E Methods
- e. Underlying Assumptions
- f. Relevant Research
- g. Survey Data on Use of Assessment Methods, including T&Es
- h. Conclusions
- i. Summary of Research
- j. Bibliography

III. Minimum Qualifications Requirements (MQs)

- a. What is a Minimum Qualification? (types, forms, uses)
- b. Effects of Stringent and Unstringent MQs
- c. Content Validation and MQs
- d. The Principle of Exclusivity
- e. Use of General Education, the DOT, and GED Ratings
- f. Use of Specific Education and Training
- g. Examples of Content-Oriented MQ Validation Methods
- h. Exercise – Preparing an Assessment Plan and an MQ Requirement
- i. Other Factors and Emerging Trends
- j. References

IV. Improved Point Method

- a. Overview of the Improved Point Method
- b. Washington State Report on the Improved Point Method
- c. Positive and Negative Features
- d. How Can the Improved Point Method be further refined?
- e. When to use the Improved Point Method

V. Grouping Method and Case Study Materials

- a. Overview of the Grouping Method
- b. Outline of the method
- c. Review of a grouping method example – Automotive Equipment Foreman
- d. Grouping Method Exercise – Development of standard for a grouping method T&E
- e. Research Findings on the Grouping Method
- f. Positive and Negative Features
- g. When to use the Grouping Method
- h. Some possible ways to improve the Grouping Method
- i. When not to use the Grouping Method
- j. References
- k. Grouping Method Exercise
- l. Case Study Materials (to be used for the grouping method exercise as well as in the exercises for the behavior consistency and self-report and self-rating methods)

VI. Behavioral Consistency Method

- a. Overview – Using Past Behavior to Predict Future Behavior
- b. Conduct of the Examination
- c. Designing a Behavioral Consistency Examination
- d. Deciding What to Assess
- e. Designing the Supplemental Application Form
- f. Developing a Rating Procedure
 - Ranking Method of Rating
 - Anchored Rating Scales
 - Narrative Description Rating Scales
- g. Scoring Procedures
- h. Training Raters
- i. Checking Rater Consistency
- j. Research Findings
- k. When to Use and When Not to Use the Behavioral Consistency Method
- l. Advantages and Disadvantages
- m. Conclusions and Recommendations
- n. Exercise – Behavioral Consistency Method

VII. Self-Report and Self-Rating Methods

- a. Overview of this family of methods
 1. Types of self-report and self-rating T&Es
 2. Needed job analysis information
 3. Identifying tasks or KSAs to include in the T&E
- b. Job Analysis Rating Scales

- c. Task Based T&E Methods
- d. KSA Based T&E Methods
- e. Mixed Approaches
- f. Designing the Supplemental Application Form
- g. Types of Rating Scales for Supplemental Applications
- h. Application Supplement Examples
- i. Advantages and Disadvantages of Self-Report and Self-Rating T&Es
- j. When to Use and when Not to Use the Task Based and KSA Based T&E Methods
- k. References and Research Information
- l. Exercise – Development of Self-Report or Self-Rating T&Es
- m. Scoring Self-Report or Self-Rating T&Es
- n. Exercise - Scoring Self-Report or Self-Rating T&Es
- o. Questions and Comments

VIII. Resource Allocation Strategies, and Determining When T&Es are Appropriate

- a. Resource Allocation Strategies
 - Available resources
 - Recruitment
 - Selection Ratio
 - Security
 - Applicant Preferences
 - Eligible List Usage
 - Measurement Considerations
- b. Comparison of T&E Methods
- c. Workshop – Determining the Type of T&E To Use
 - Case #1 - Environmentalist
 - Case #2 - Personnel Assessment Specialist

IX. Other Topics of Interest to participants, Course Evaluation, and Feedback

- a. Other Topics
- b. Completing of Seminar Evaluation Form

Objectives

IPMAAC Oral Examinations Seminar (Structured Employment and Promotion Interviews)

At the completion of this seminar, participants should be aware of, know, or be able to do the items listed below under the headings for each section of this training.

Section I. Introductions and Course Overview

Participants will:

- become familiar with the objectives and content of the training, and begin to share experiences and solutions related to oral examinations
- begin to build a helping relationship with the instructors and other class members

Section II. Overview of Oral Examinations

Participants will be aware of:

- the uses, advantages and disadvantages of oral examinations
- alternative oral examination formats
- a variety of uses of oral examinations in public sector merit system
- research findings on the validity, reliability and fairness of structured oral examinations
- legal aspects of the use of oral examinations, and guidance based on a review of legal cases
- the components of structured oral examinations
- references on oral examinations

Section III. Job Analysis for Oral Examination Development

Participants will:

- be aware of how to review job analysis data for oral test planning
- be aware of factors commonly assessed in oral examinations
- be able to select or develop appropriate rating factors or dimensions
- be able to use the critical incident technique
- be aware of documentation requirements for establishing content validity evidence

Section IV. Oral Test Question Development

Participants will be able to:

- describe the most common oral examination question formats and question types
- discuss the relative advantages and disadvantages of each type of oral test question
- develop and critically evaluate alternative types of oral test questions

Section V. Rating Scales and Scoring

Participants will

- be aware of alternative scaling and scoring methods
- be able to select or develop an appropriate rating scale and scoring standards

Section VI. Selecting and Training Oral Examiners

Participants will be able to:

- describe sources of oral examiners
- identify the requirements which oral examiners should meet
- be aware of the types of information which should be provided to oral examiners
- be aware of the rating process to be followed
- be able to provide guidance on note taking and follow-up questions
- plan the content of a rater training program
- conduct a segment of a rater training program

Section VII. Oral Test Administration

Participants will

- be aware of considerations for scheduling, processing, staffing, needed facilities, etc.
- be aware of the need for candidate notification, candidate orientation and study periods
- be aware of the need for oral test monitoring and monitoring procedures
- be aware of issues relating to the use of multiple oral panels, test security, alternate test forms, and taping oral examinations
- be able to conduct an oral examination

Section VIII. Evaluation of the Oral Examination

Participants will:

- be aware of the basic test statistics which need to be reviewed to evaluate the effectiveness of an oral examination
- be aware of sources of information for obtaining feedback on the effectiveness of an oral examination, and methods of gathering and reviewing such information
- be able to link examination feedback to a variety of types of rating errors
- be aware of information to be provided in an oral examination review session, and aware of types of information to provide and guidelines for conducting an oral examination review session
- share experiences in addressing problems with oral examinations

Section IX. Other Topics

Participants will:

- be aware of methods used to control the costs of oral examinations
- share experiences relating to the remaining questions and issues raised by class members
- provide an evaluation of and feedback on the seminar

Content Outline and Schedule

IPMAAC Oral Examinations Seminar (Structured Employment and Promotion Interviews)

Section	Topic	Day and approximate length
I.	Introductions and course overview	Day 1 am (1 hour)
II.	Overview of oral examinations <ul style="list-style-type: none"> • Types of oral examinations and their benefits • When is an oral examination appropriate? • Combining an oral with other examination types • Research findings – validity, reliability, fairness, structure • Legal findings and guidance • Components of a structured oral examination 	Day 1 am (2 hours)
III.	Job analysis for oral examination development <ul style="list-style-type: none"> • Review of job analysis data for oral test planning • Factors commonly assessed in oral examinations • Selecting or developing rating factors or dimensions • Use of the critical incident technique • Critical Incident Exercise • Documentation • Some other uses of Critical Incidents 	Day 1 pm (3 hours)
IV.	Oral test question development <ul style="list-style-type: none"> • Types of oral test questions and situations, when to use them, advantages and disadvantages • Exercise – development of stimulus materials 	Day 2 am (3 hours)
V.	Rating scales and scoring <ul style="list-style-type: none"> • Alternative scaling and scoring methods • Exercise – development of rating scales and scoring standards 	Day 2 pm (3 hours)
VI.	Selecting and training oral examiners <ul style="list-style-type: none"> • Sources of raters and guides for selecting raters • Rater training – guidelines, topics, and examples • Rater training exercises 	Day 3 am (3 hours)

VII.	<p>Oral test administration</p> <ul style="list-style-type: none"> • Scheduling • Facilities and equipment • Candidate notification and processing • Staffing • Candidate orientation and study periods • Examination monitors • Multiple panels and alternate test forms • Taping • Test security • Test administration procedures • Exercise – Conduct of an oral examination (using the questions and scoring procedures from unit IV and V exercises) 	<p>Day 3 pm (2 hours)</p>
VIII.	<p>Evaluation of the oral examination</p> <ul style="list-style-type: none"> • Review of test statistics • Feedback and information on exam effectiveness • Examination review sessions 	<p>Day 3 pm (1/2 hour)</p>
IX.	<p>Other topics of interest to participants, and course evaluation and feedback</p> <ul style="list-style-type: none"> • Cost issues • Problems and solutions • Other topics • Course evaluation 	<p>Day 3 pm (1/2 hour)</p>

Typical Daily Schedule

8:30 am to 4:30 pm

Lunch – typically one hour

Lunch and breaks scheduled at convenient times,
depending on the topic and our progress

MAPAC Item Writing for Selection Specialists Course Objectives

Upon completion of the course, participants will be aware of:

- *Job analysis, examination planning and test development*
- *Item Writing Guidelines and Procedures*
- *Use of Data to Improve Written Tests*
- *The Practical Considerations of Administering an Examination*

Summary Content Outline

- Section I: *Introduction*
Objectives
Agenda
- Section II: *Overview of Job Analysis, Examination Planning and Written Test Development*
Objectives
Overview
Job Analysis
Test Development
- Section III: *Item Writing*
Objectives
Overview
Components of Multiple-Choice Items
Writing Matching Items
Writing Multiple-Choice Items
Workshop
Using Subject Matter Experts
Scoring Test Items
- Section IV: *Using Data to Analyze and Improve Written Tests*
Review of Test Statistics
Formal Item Analysis
Workshop
- Section V: *Practical Considerations*
Preparing the Test for Use
Test administration
Evaluation of Examination
Documentation
Coding and organizing test items/creating item databases
- Section VI: *References and Course Evaluations*

Agenda

© MAPAC Item Writing for Selection Specialists

Day One 8:30 – 4:30

- 8:30 - 9:00 I. Introductions and Objectives
- 9:00 - 9:45 II. Overview of Written Test Development
- 9:45 - 10:00 Break
- 10:15 - 12:00 III. Item Writing
- 12:00 - 1:00 Lunch
- 1:00 - 2:30 Item Writing (continued)
- 2:30 - 2:45 Break
- 2:45 - 4:30 Item Writing (continued)

Day Two 8:30 – 4:30

- 8:30 - 10:00 Item Writing (continued)
- 10:00 - 10:15 Break
- 10:15 - 12:00 Item Writing (continued)
- 12:00 - 1:00 Lunch
- 1:00 - 2:30 Item Writing (continued)
- 2:30 - 2:45 Break
- 2:45 - 4:30 Item Writing (continued)

Day Three 8:30 – 4:30

- 8:30 - 9:45 IV. Using Data to Improve Written Tests
- 9:45 - 10:00 Break
- 10:15 - 12:00 Using Data to Improve Written Tests (continued)
- 12:00 - 1:00 Lunch
- 1:00 - 3:00 V. Practical Considerations
- 3:00 - 4:30 VI. References, Course Evaluations

Detailed Course Outline

© MAPAC Item Writing for Selection Specialists

I. Introduction

II. Overview of Job Analysis, Examination Planning and Written Test Development

A. Overview

1. Why use written alternate choice tests?
 - a. Recommendation of Dr. Ebel
 - b. Validity data
 - c. Reliability
 - d. Cost & Efficiency
 - e. Jobs most suited
 - f. Disadvantages
 - g. Comparison with rating based tests

B. Job Analysis

1. Definition
2. Job Analysis Models
3. Developing Effective Task and KSA Statements
 - a. Standards for effective tasks and KSA statements
 - b. Task Statements
 - (a) Definitions
 - (b) Ingredients
 - c. KSA Statements
 - (a.) Definitions of knowledge, skill and ability
 - (b.) Degree of KSA (entry level vs. full performance)

C. Test Development

1. Examination Plan
 - a. Identification of KSA's that are measurable via the written exam
 - b. Linkage of measurable, critical KSA's to the critical tasks.
 - c. Grouping KSA's by assessment domains
 - d. Preliminary weighting schema for assessment domains
2. Examination construction
 - a. Recruitment of SME's
 - b. Evaluation of existing items using item analysis information and SME input
 - c. Obtaining items from other sources (e.g., MAPAC test exchange agreement, WRIB)
 - d. Training SME's in item review and writing
 - e. Editing items and writing new items
 - f. Item to KSA linkage of draft items
 - g. Development of draft examination

3. Review
 - a. SME review draft examination
 - b. Finalizing of the weighting schema
 - c. Other review processes that are a part of your agency protocol (EEO office, Manager of Testing, etc.)
4. Test time and length

III. Item Writing

A. Overview

1. Basic Concepts of Item Writing
 - a. Significance/Relevance
 - b. Clarity of items
 - c. Difficulty level of items
 - d. Reading levels
 - e. Documenting source materials
2. Theory on Multiple-choice items
3. Levels of Knowledge
4. Item Formats
5. Types of Multiple-choice test items

B. Components of an Item

1. The stem
2. Key or Correct Response
3. Distracters
 - a. Items with differing numbers of distracters in the same test

C. Writing Matching Items

1. Suggestions for writing matching items

D. Writing Multiple-Choice Items

1. Suggestions for writing multiple-choice items
 - a. Stem Writing
 - b. Discriminator writing
 - c. Making the item clear and specific
 - d. Using negatives in an item
 - e. Depth of knowledge in items
 - f. Only one correct answer
 - g. Plausibility of wrong answers
 - h. Unintentional clues
 - i. Options “none of these” and “all of the above”
2. Additional Suggestions for Improving Alternatives of Multiple-Choice Items
 - a. Things to do
 - b. Things to avoid
3. Item Development and Review Checklist

Exercise: Sample Test Items – Find the Errors
Generic Item Shells

WORKSHOP- Part I. Stem Writing
Part II. Writing Alternatives and Options

- B. Using Subject Matter Experts (SME's)
- C. Selecting SME's
- D. Training SME's to assist in test construction
- E. Writing and reviewing items with SME's and Personnel Assessment Specialists
- F. Test security issues
- G. Scoring Test Items
- H. Establishing and verifying a scoring key
 - 2. Use of a correction for guessing
- I. Differential weightings of alternatives

IV. Using Data to Analyze and Improve Written Tests

- A. Review of test statistics
 - 1. Overall test statistics
 - 2. Sub-score test statistics
 - 3. Test score distribution
 - 4. Individual item statistics
- B. Formal item analysis procedures/Review of score distributions
 - 1. The Discrimination Index
 - 2. Item-Total Score Correlation/Item-Part Score Correlation
 - 3. Using Discrimination Indexes
 - 4. Application of item analysis to complement ongoing item writing efforts
- C. **WORKSHOP-**Reviewing and interpreting Item Analysis data and making decisions based on the data (editing, etc.)

V. Practical considerations

- A. Preparing the test for use
 - 1. Prepare more items than you will need
 - 2. Proofread the items
 - 3. Arranging the items on the test
 - 4. Test layout
 - 5. Grouping items
 - 6. Grouping items within the same content
 - 7. Arranging items
 - 8. Proofing and duplication
 - 9. Test instructions
 - 10. Use of aids (calculators, dictionaries, references, etc.)

- B. Test administration
 - a. Administration and scoring of the exams
 - b. Item analysis to resolve errors in the keys
 - c. Generation of list of eligibles
 - d. Mailing scores and qualifying information to candidates

- C. Evaluation of Examination Procedure and Project Documentation
 - a. Compilation of exam development materials
 - b. Project Report

- D. Coding and organizing test items/creating item databases

VI. References and Course Evaluation

Objectives

MAPAC Essential Statistics for Selection Specialists

Upon completion of the course, participants will:

- *Understand the purpose, history, and uses of statistics.*
- *Be able to define some critical statistical terms.*
- *Know when to use different types of statistics*
- *Know how to illustrate or display statistical results*
- *Understand the different measures of central tendency*
- *Identify and use the different measures of variability*
- *Understand how and why scores are converted/standardize.*
- *Understand the basics of correlation and when it should be calculated*
- *Understand the rationale behind the classical true score theory*
- *Be able to identify and compare the various forms of reliability and validity*
- *Understand the basic guidelines and principles that selection specialist must abide by.*
- *Be able to identify passing scores when determining eligibility for employment*
- *Understand the basic concepts behind weighting and combining test scores, as well as and converting scores to final grades*
- *Be aware of issues surrounding adverse impact and know how to determine if a selection device has adverse impact*

General Content Outline

© MAPAC Essential Statistics for Selection Specialists

SECTION I: INTRODUCTION

SECTION II: INTRODUCTORY TOPICS

SECTION III: PRELIMINARY CONCEPTS

SECTION IV: FREQUENCY DISTRIBUTIONS, PERCENTILES AND
PERCENTILE RANKS

SECTION V: THE NORMAL CURVE

SECTION VI: CENTRAL TENDENCY

SECTION VII: VARIABILITY

SECTION VIII: DERIVED SCORES

SECTION IX: CORRELATION

SECTION X: CLASSICAL TRUE SCORE THEORY

SECTION XI: RELIABILITY

SECTION XII: VALIDITY

SECTION XIII: PASSING SCORES, WEIGHTING AND COMBINING TEST
SCORES, AND CONVERTING SCORES TO FINAL GRADES

SECTION XIV: FAIRNESS AND ADVERSE IMPACT

SECTION XV: REFERENCES AND COURSE EVALUATION

Agenda and Detailed Content Outline

© MAPAC Essential Statistics for Selection Specialists

DAY ONE – 8:30 am – 4:30 pm

8:30

30 min.

- I. **Introduction**
- Introductions
 - Overall course objectives
 - Agenda

9:00

30 Min.

- II. **Introductory Topics**
- Descriptive and inferential Statistics
 - Relationship
 - Concerns

9:30

20 min.

- III. **Preliminary Concepts**
- Some Definitions
 - General overview of concepts

9:50

30 min.

- IV. **Frequency Distributions, Percentiles and Percentile Ranks**
- Various types of charts and diagrams
 - Factors affecting shape
 - Characteristics

10:20

20 min.

BREAK

10:40

45 min.

- V. **The Normal Curve**
- History and nature of the Normal Curve
 - Standard scores and the Normal Curve
 - Finding areas and scores
 - The Normal Curve as a model

11:25

40 min.

- VI. **Central Tendency**
- The Mode
 - The Median
 - The Arithmetic Mean
 - Properties of the Mode
 - Properties of the Mean
 - Properties of the Median
 - Measures of Central Tendency in Symmetrical and Asymmetrical Distributions

12:05
1 Hour

LUNCH

1:00
2 Hours

VII. Variability

- **The Range**
- **The Semi-Interquartile Range**
- **Deviation Scores**
- **Deviational Measures: The Variance**
- **Deviational Measures: The Standard Deviation**
- **Calculation of the Variance and Standard Deviation: Raw Score Method**
- **Properties of the Range**
- **Properties of the Semi-Interquartile Range**
- **Properties of the Standard Deviation**
- **Score Transformations and Measures of Variability**
- **Standard Scores (z-scores)**
- **Measures of Variability and the Normal Distribution**
- **Comparing the means of Two Distributions**

3:00
20 Min.

BREAK

3:20
1 Hour

VIII. Derived Scores

- **The Need for Derived Scores**
- **Standard Scores**
- **Translating Raw Scores into Standard Scores**
- **Standard Scores as Linear Transformations of Raw Scores**
- **Percentile Scores**
- **Comparability of Scores**
- **Normalized Standard Scores**

DAY TWO – 8:30 am – 4:30 pm

8:30

1 Hour

IX. Correlation

- Some History
- The Scatter Diagram
- Correlation: A Matter of Direction
- Correlation: A Matter of Degree
- Understanding the Meaning of Degree of Correlation
- Formulas for Pearson's Coefficient of Correlation
- Calculating r from Raw Scores
- Correlation does not Infer Causation
- Cautions Concerning Correlation Coefficients

9:30

½ Hour

X. Classical True-Score Theory

- Definition and Theory
- Assumptions
- Conclusions

10:00

3 Hours

XI. Reliability

- Introduction/Definition
- Types of Test Reliability
 - Test/Retest
 - Parallel-Forms
 - Alternate Forms
 - Split Halves
- Comparison of Methods of Estimating Reliabilities
- Standard Errors of Measurement and Confidence Intervals for True Scores
- Sources of systematic and unsystematic variation
- Improving Reliability of Measurement
- Increasing number of measurements (number of items & candidates)
- Choosing better items
- Procedural improvements
- APA's Testing Standards and Reliability (Chapter 2)
- Background
- Standard

12:30

1 Hour

LUNCH

1:30

3 Hours XII. **Validity**

- Introduction/Definition
- Types of Test Validity
- Content Validity
- Criterion-Related Validity
- Predictive Validity
- Concurrent Validity
- Methodological and statistical problems in criterion-related validity
- Estimating criterion from predictor scores
- Index of forecasting efficiency
- Effects of reliability
- Range of individual differences
- Construct Validity
- Discussion on techniques for maximizing validity
- Effects of reliability
- Range of individual differences
- Within group differences
- Between group differences
- Multiple Predictors or Criteria
- Professional Standards for Validity
 - EEOC
 - APA
 - SIOP Principles
- Validity Generalization or Transportability
- Summary of Validity Concepts

DAY THREE – 8:30 am – 3:30 pm

8:30

3 ½ Hours XIII. **Passing Scores, Weighting and Combining Test Scores, and Converting Scores to Final Grades**

- Multiple hurdles vs. compensatory selection systems
- Passing Scores
 1. What is a passing score?
 2. Professional and legal guidelines (SIOP, APA, Uniform Guidelines)
 3. Local regulations
 4. Comparison of guidelines and regulations
 5. Some alternative passing score methods
 - a. Fixed passing score
 - b. Job-related approaches
 - c. Flexible passing scores
 - d. Chance-based scores
 - e. Use of the minimum qualification as the passing standard
 6. Angoff item rating method
 7. Exercise – Angoff method
 8. Minimizing the probability of passing by chance
 9. Exercise – calculating a passing score

- **Weighting and Combining Test Scores**
 1. Introduction
 2. Alternative approaches
 3. Alternative procedures for weighting
 - a. Unit weighting
 - b. Variation in points assigned
 - c. Ratio conversion
 - d. Standard scores
 - e. Multiple-regression
 4. Nominal vs. effective weights
 5. Combining weighted test scores
 6. Exercise – weighting and combining test scores

- **Calculating Final Grades**
 1. Converting scores to grades or categories
 2. Continuous scores vs. groups
 3. Methods of transforming scores (grouping, ratio conversion, standard scores)
 4. Exercise – calculating final grades

12:00

1 Hour

LUNCH

1:00

2 Hours

XIV. Fairness and Adverse Impact

- **A legal definition of fairness**
- **Model for investigating fairness**
- **Regulations and Standards**
- **Affirmative action**
- **Uniform Guidelines**
- **What is Adverse Impact?**
- **4/5's Rule**
- **Other tests of Selection Rates**
- **Effect size comparisons**
- **Employer options**
- **Addressing adverse impact**