CU-101.2

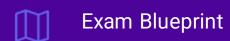
Introduction to Testing:

# Elements of a Testing Project



## **Elements of a Testing Project >>>**













Creating Forms & Scoring





**Exam Delivery** 

### Documentation > > >



All elements of test development should be **Documented** 

- > For **Test Takers** ... to ensure consistency, transparency, & fairness
- > For **End Consumers** [Employers, General Public, etc.] ... to provide transparency & engender trust
- > For **Test Sponsors** ... to follow best practices, to ensure auditability and legal defensibility
  - >>> Integrated documentation is best! < < <







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# Subject Matter Experts > > >



We're going to need some help ...

- > To assess competency, we need to the help of people already competent!
- > These are generally referred to as **Subject Matter Experts** [ SMEs ]
- > SMEs help us ...
  - > Identify & evaluate tasks
  - > Refine the exam blueprint
  - > Write & review items
  - > Set passing standards
- > Without SMEs we're going nowhere fast



## Job Task Analysis > > >



An **Exam** should be based on a thorough analysis of curriculum, job, or role

- > It is critical to know what you're asking the exam to assess!
- > This the purpose of a **Job Task Analysis** [ JTA ]
- > A JTA is made up of three elements ...
  - > Task Elicitation the Tasks performed by competent practitioners
  - > Survey a broad review provides data to support task and their validity
  - > Analysis judicious filtering and calculations identify critical tasks



# [Exam] Blueprint > > >



We need to know [EXPLICITLY] what the Exam is intended to assess

- > Critical **Tasks** are linked to **Domains** ... broad areas of knowledge/skill/content to be assessed
- > Domains and their relative weightings form the initial basis of the **Exam Blueprint**
- > [Frequently] domains are split or subdivided for more granularity/specificity
- > Relative importance of subdomains is established
- > Domains combined with weighting describes the distribution of items [ questions ] needed
  - >>> Methods for arriving at a **final** Blueprint can be highly variable! <<<



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## Item Writing > > >

- Driven by an exam blueprint, **Items** are written
- > Enough Items must be written [ Authored ] to satisfy the exam blueprint
- > Factors [typically] include ...
  - > Topic weighting ... determines distribution of items [ % ] by content area
  - > Length of exam [ in items ]
  - > Number of equivalent forms needed
  - > Allowances for "bad" items
- > Items should be written following best practices and job norms
- > Items are [typically] **Reviewed** and **Revised** until they are **Accepted**

# **Beta Testing & Analysis > > >**



Our new exam is **Delivered** and **Results** are **Psychometrically** analyzed

- > We test the test!
- > We call this a **Beta** [**Test** or **Exam**]
- > Data is gathered and evaluated to assure exam is fit for purpose
- > To analyze data, we apply the appropriate **Psychometric** statistical techniques







# Standard Setting > > >



Standard Setting determines the performance required to Pass the exam

- > We need to determine the **Passing Standard**, often referred to as the **Cut Score** 
  - >>> This determination cannot be arbitrary or capricious! << <
- > In standard setting, a single form is reviewed resulting in a passing standard for that form
- > There are a number of methodologies that can be used to arrive at the passing standard
- > The Minimally Qualified Candidate







## **Creating Forms & Scoring > > >**



#### Assembling forms and determining outcomes

- > A **Form** is a specific set of items that adheres to the blueprint
- > How forms are assembled can be highly variable
  - > Multiple forms are often used to increase security
  - > We want forms to be as similar as possible
- > **Scores** are the calculated outcomes of the test
  - > Outcomes may or may not be reported
    - >>> Reliable outcomes are dependent on the design of the exam! <<<

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## Exam Delivery > > >



There are many considerations when it comes to **Exam Delivery** 

#### How do candidates get access?

- > Prerequisites/Eligibility & Booking considerations
- > **Availability** by date, window, region, country, etc.
- > Costs to test
- > **Retake** policies

Under what conditions do candidates take tests?

- > Paper/Pencil vs. Computer
- > Remote vs. In-Person
- > Proctored vs. Un-proctored

**CU-101** 

Introduction to Testing

# **Elements of a Testing Project**

Till next time ...

