


On-Line T&Es

A Better Mousetrap?



IPMAAC

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Service**



Department of Civil Service

Provides

- ❖ **Merit System Administration**
- ❖ **Human Resource Management**
- ❖ **Technical Assistance**

To

- ❖ **70 State Agencies**
 - ❖ **105 Local Municipalities**
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Examination Services (2003-4)

823	State exams held
4,523	Local exam requests processed
116,000 +	Applications for state exams
91,000+	Local scheduled candidates
5,000	Written tests scored
463	Non-written tests scored
31,000	Test questions used



Types of Tests We Do

- ❖ multiple choice
 - ❖ written simulation exercises
 - ❖ free-answer written tests
 - ❖ structured interviews
 - ❖ performance tests
 - ❖ T&E ratings
 - ❖ listening tests
 - ❖ foreign-language testing
 - ❖ video based tests
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Exam Service – T&Es

Why/When Do T&Es?

- ❖ highly credentialized positions
 - ❖ no written test material available
 - ❖ small candidate counts
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Exam Service – T&Es

Point Factor Ratings

- ❖ degrees obtained
 - ❖ certifications
 - ❖ relevant training/CE courses
 - ❖ job-relevant experiences
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Exam Service – T&Es

Advantages

- ❖ **standardized and ‘fair’ process**
 - ❖ **accepted when occupation is highly credentialized**
 - ❖ **easier to develop, administer and score than written tests for small candidate populations**
 - ❖ **decentralized administration**
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Exam Service – T&Es

Constructed-Response Model

- ❖ candidates provide narrative descriptions of their relevant training and experience
 - ❖ candidates submit supplemental questionnaire, resumes, attachments and notes
 - ❖ scored by raters who apply a pre-determined rating scale to information presented by candidates
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Exam Service – T&Es

Constructed-Response Model

- ❖ **substantial ‘after’ work**
 - ❖ **comparing sometimes indecipherable information to the rating scale**
 - ❖ **subject to error**
 - ❖ **can be laborious**
 - ❖ **workload dependent on # of candidates**
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Exam Service – T&Es

Disadvantages

- ❖ evidence of low validity
 - ❖ difficult to develop rating scales
 - ❖ laborious and slow rating process
 - ❖ score confounded by quality of write-up
 - ❖ verification of statements difficult
-



Exam Service – T&Es

Disadvantages result in

- ❖ **untimely service**
 - ❖ **provisional appointments**
 - ❖ **substantial communications flow**
 - ❖ **centralized decision making**
 - ❖ **considerable test to list timeframe**
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On-line T&E system - building the mousetrap

Program Goals

- ❖ faster examination service
 - ❖ automated program
 - ❖ faster examination processing
 - ❖ maintain sound measurement procedures
 - ❖ quality not sacrificed for speed
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On-line T&E system - building the mousetrap

System Goals

- ❖ **construct title-specific T&E questionnaires**
 - ❖ **collect applicant responses on-line**
 - ❖ **check applicant minimum qualifications**
 - ❖ **manage applicant information**
 - ❖ **immediately score**
 - ❖ **provide lists to locals on-line**
 - ❖ **produce personalized rating sheets**
-



On-line T&E system - building the mousetrap

Structured Response Model – differences for test developers

- ❖ **changes where time spent and expertise used**
 - ❖ **requires more time and rigor in the front end**
 - ❖ **once developed process is more efficient and the workload is less dependent on # of candidates**
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On-line T&E system - building the mousetrap

Staff resistance

- ❖ **validity concerns**
 - ❖ **previous approach satisfactory, why change?**
 - ❖ **questionnaire development workload**
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On-line T&E system - building the mousetrap

Structured response model – difference for candidates

- ❖ candidates are presented with a set of response options
 - ❖ answered via a pull-down menu or a 'check-off' box from among the options presented
 - ❖ new system parallels old process
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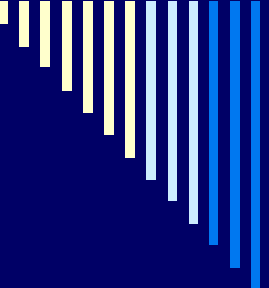
On-line T&E system - building the mousetrap

T&E Questionnaires

- ❖ rating based solely on questionnaire
- ❖ resume & attached info NOT considered

Advantages

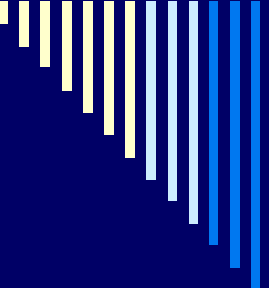
- ❖ more objective and consistent rating
 - ❖ reduces resources required for rating
 - ❖ produces eligible lists faster
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On-line T&E system – springing the mousetrap

Candidates experienced problems

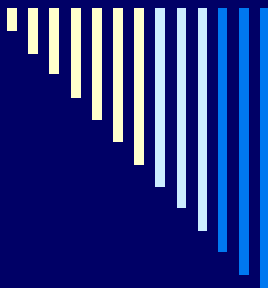
- ❖ couldn't log on (incorrectly entered SSNs)
 - ❖ browsers didn't interface properly
 - ❖ PC's set up to not accept cookies
 - ❖ if too long between responses, candidates needed to refresh
-



On-line T&E system – springing the mousetrap

Candidates experienced problems

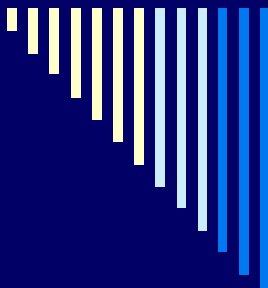
- ❖ candidates repeatedly ‘pressing’ submit button before records written
 - ❖ candidate review summary didn’t match input data
 - ❖ candidate received wrong score – bookmarked and resubmitted data
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On-line T&E system – springing the mousetrap

Candidates delay submission

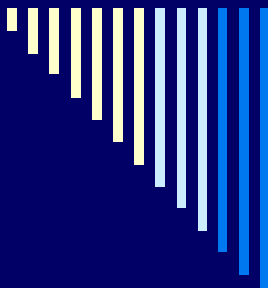
- ❖ In 2004, >85% of Librarians waited until last two days
 - ❖ 100% submitted by last day
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On-line T&E system – springing the mousetrap

Paper Copy of Questionnaire

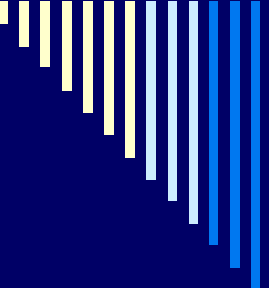
- ❖ **NYS law stipulates that if requested, citizens must be provided with a non-electronic copy of documents they must complete.**
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On-line T&E system – springing the mousetrap

Candidates' willingness to use the Web

- ❖ optional in 2003 (Librarians)
 - ❖ 60% used web
 - ❖ 40% used hard copy
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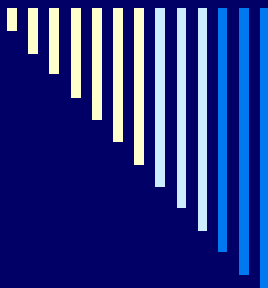


On-line T&E system – tweaking the mousetrap

Inform candidates to log on Web site early

- ❖ provides time to correct glitches
- ❖ allows candidates time to gather material needed to respond
- ❖ ameliorates last minute crush on help desk

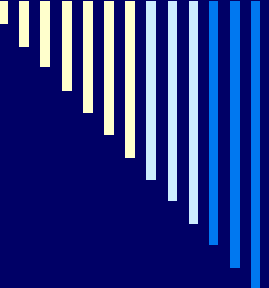
***Candidates – gather ye info ere the last
minute***



On-line T&E system – tweaking the mousetrap

Set up submission tracking system

- ❖ **Forensic Scientist series – 56 examinations**
 - ❖ **submission period May 1 to May 31**
 - ❖ **as of May 10**
 - ❖ **204 candidates registered**
 - ❖ **29 candidates started**
 - ❖ **6 candidates completed**
-



On-line T&E system – tweaking the mousetrap

Set up a help desk

- ❖ e-mail and phone line to answer questions
- ❖ answer technical Web interface questions only
- ❖ do not guide candidates in how to respond to content

Don't schedule final submission date for over a weekend



On-line T&E system – a better mousetrap?

Measurement Implications

- ❖ **constructed response – difficult to verify the often ambiguous statements made by candidates**
- ❖ **structured response– gathers same information from all candidates**

Candidates must provide a specific reference of an individual who can verify all claims



On-line T&E system – a better mousetrap?

*Measurement Implications - verification
of responses*

- ❖ **harder to purposefully cheat**
- ❖ **harder to unintentionally cheat**

Agencies are responsible for verification



On-line T&E system – a better mousetrap?

Measurement Implications

- ❖ **constructed response– often difficult to decipher overlapping periods of full-time experience**
 - ❖ **structured response - prevents candidates from receiving credit more than once for a single period of employment**
-



On-line T&E system – a better mousetrap?

Measurement Implications

- ❖ **constructed response– often difficult to sort out part-time work**
 - ❖ **structured response– allows applicants to receive credit for overlapping periods of acceptable part-time employment**
-



On-line T&E system – a better mousetrap?

Measurement Implications

- ❖ **constructed response– much experience/training severely dichotomized in scoring**
 - ❖ **structured response– allows for easy scoring of continuous variables**
-



On-line T&E system – a better mousetrap?

Don't ask; don't tell

- ❖ 'mandatory' in 2004 (with exception clause) - 100% used web

Make prior responses available

- ❖ The system allowed candidates to access responses from 2003, flood the data fields and then update the information

Candidates loved this option!



On-line T&E system – a better mousetrap?

Faster processing

- ❖ in 2002 constructed response model used
 - ❖ time to finalize results – 4 months
 - ❖ in 2003 web model with paper submission option
 - ❖ time to finalize results – 2 months
 - ❖ in 2004 web only submission
 - ❖ time to finalize results – 8 days
-



On-line T&E system – a better mousetrap?

Comparative Study

❖ **Constructed Response in 2002**

V.

❖ **Structured Response in 2003**

Results approached unity



On-line T&E system – a better mousetrap?

Measurement Implications

- ❖ **constructed response– T&E laborious for more than a few candidates**
 - ❖ **structured response - program can quickly and accurately score hundreds of T&E questionnaires**
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On-line T&E system – the rat's tail?

Why no demonstrated validity for point-factor T&Es—restriction of range and other issues



On-line T&E system – catching the right mice

The Task Force will

- ❖ **research and design T&E models to enhance validity**
 - ❖ **behavioral consistency**
 - ❖ **task based**
 - ❖ **KSA based**
 - ❖ **achievement record**
-



On-line T&E system – catching the right mice

The Task Force will

- ❖ develop 3-4 alternative T&E models
 - ❖ develop protocols for appropriate application of alternative T&E models
 - ❖ develop web delivery mechanisms
-



On-line T&E system – catching the right mice

The Task Force will

- ❖ **set up a methodology for greater interaction with job experts during T&E development**



On-line T&E system – catching the right mice

The Task Force will

- ❖ **develop approaches & benchmarks for evaluating the effectiveness of T&Es**
 - ❖ **determine item & test analysis methodologies for T&E responses and scores**
 - ❖ **conduct validity studies to improve the quality of subsequent holdings**
-



On-line T&E system – building a better trap

Library of model sections & questions

- ❖ a library of T&E questions will become available to all examiners
 - ❖ examiners will be able to utilize questions developed for one title that are appropriate to another
-



On-line T&E system – building a better trap

***T&E development & administration easier
and more efficient***

- ❖ **the more T&E examinations moved to the system, and the more years they run, the greater the savings in professional staff time**
 - ❖ **improves the efficiency and effectiveness of the T&E examination service function**
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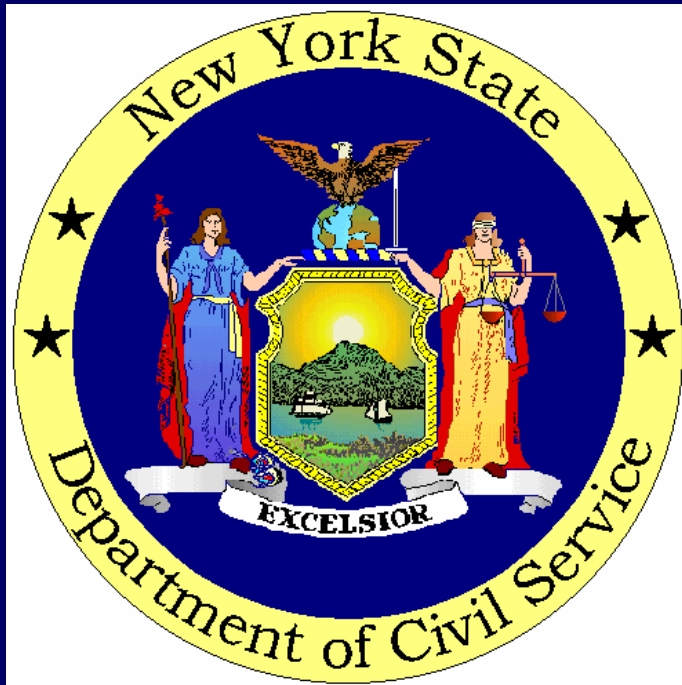
On-line T&E system – building a better trap

Web-based T&E system

- ❖ **T&Es with improved validity**
 - ❖ **more job expert involvement**
 - ❖ **increased staff efficiency (once structured response format is done, reiteration is like m/c test)**
 - ❖ **all T&Es web delivered**
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Thank You



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