



# A Hard Look at Harnessing Online Testing: What are Agencies Saying and What is There to Offer?

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*Human Resource Services*



# About CPS Human Resource Services

## **Who We Are**

CPS is a self-supporting public agency providing a full range of human resource services to the public and nonprofit sectors. We have unique expertise in delivering HR management and consulting services, employment testing, assessment services, and applicant tracking software to government agencies throughout North America. We provide organizational strategy planning models and systems to assist agencies in the recruitment, selection, and development of employees.

## **Our Vision**

To be the provider of choice for human resource management in the public sector.

## **Our Mission**

To transform human resource management in the public sector.



# Our Services

## TALENT MANAGEMENT CONTINUUM

*Providing the complete range of human resource services for better recruitment, selection and development of employees.*



### Organizational Strategy

Organizational Assessment, Redesign and Re-engineering

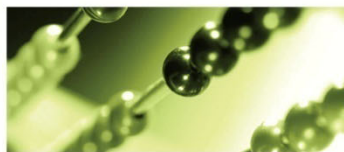
Workforce Planning

Succession Planning

Competency Models

Performance Management

Career Development Systems



### Acquisition

Recruitment

Staffing and Classification Services

Employment Testing

Assessment

Applicant Tracking and Testing Systems



### Development

Leadership and Management Development

Employee Training

Staff Development and Mentoring Programs

Team Building and Facilitation



### Retention and Deployment

Classification and Compensation Studies

Employee Relations

Rules, Policies and Procedures Development

HR Outsourcing



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# Overview of the Presentation

- **Current State of Online Testing**
- **Survey Results**
- **Unproctored Internet Testing**
- **Economy and Online Testing**
- **Issues/Solutions**
- **Conclusions**



# What is a Test?

- **Any measure, combination of measures, or procedure used as a basis for any employment decision** (*Uniform Guidelines, 1978*).
- **Any procedure used singly or in combination to make a personnel decision** (*Principles, 2003*).
- **An evaluative device or procedure in which a sample of an examinee's behavior in a specified domain is obtained and subsequently evaluated and scored using a standardized process** (*Standards, 1999*).





# Why Use Online Testing?

- **Broader applicant pool**
  - Reaches candidates over larger geographical area
  - Reaches passive job seekers
- **Shortened Recruitment Cycle** (Lievens & Harris, 2003) (Mooney, 2002)
  - Reduces applicant withdrawal (Rynes, Bretz and Gerhart, 1991)
  - Decreased Cost (Cober et. al, 2000) (Mooney, 2002)
  - Less proctors needed
  - Resources (less space needed)
- **Organizational Image**
  - Seen as up to date





# Why Use Online Testing?

- **Easier to update tests**
  - Don't have throw away printed copies of outdated tests
- **Increased Standardization (Reliability)**
  - Test administered the same way every time
- **Improved Security**
  - No paper copies
- **Flexibility in administration**
  - 24/7 availability
- **Item Format**
  - Ability to use item formats not compatible with paper-and-pencil







# Why Not Use Online Testing

- **Too many applicants**
  - Sifting through the unqualified
- **Test Security**
  - Candidate concern over personal information
- **Technical difficulties**
  - Can have negative effects on organizational image
  - Over reliance on technical expertise (vendor)
- **Cost**
  - Implementation and resources are costly





# Why Not Use Online Testing

- **Concern over diversity of applicant pool**
  - Access to technology by certain groups
- **Equivalency to paper-and-pencil version**
- **Loss of personal touch** (Chapman & Webster, 2003)





# Current State of Online Testing

## 2009 Global Assessment Trends Report (Previsor)

- Nearly 60% of U.S. companies allow candidates to test remotely; nearly 90% for non-US companies
- 83% of U.S. companies and 75% of non-U.S. companies prefer to use realistic assessments for hiring
  - This may require an increased reliance on technology

## Piotrowski & Armstrong (2006)

- 9.3% of companies use online screening tests
- 88% of companies use online job boards and 89% use company websites for job announcements
- 21.9% of companies are considering future use of online pre-employment screening; 66% of companies do not have plans to incorporate online pre-employment assessment in the near future





# Current State of Online Testing

- 25% of respondents indicated strong success with acquiring and implementing technology in the selection process. Approximately 33% indicated limited success
- Organizations that want to project an image of growth, and being aggressive, dynamic, and results-oriented are likely to invest more in technology in the future than organizations projecting an image of being a “people organization.”
- None of the companies felt technology use in HR was a fleeting trend and each company had plans to increase their use of technology-based approaches to recruitment and selection.
- Most organizations rely on a mix of traditional methods and technology solutions
- Technology plays more of a role in the early screening processes and not as much in the final stages (Chapman, & Webster, 2003)





# Current State of Online Testing

- 10 states had adopted options for doing assessments and selection online, but only 3 out of 23 states conduct testing online
- All states either had downloadable application forms or allowed them to be submitted online
- All states that tracked applicant numbers saw an increase in the number of applications received
- The most common challenges for states regarding implementation of e-recruitment are funding, inadequate training of HR staff, and technical difficulties.
- Only three states measure cost per hire (Kim & O'Connor, 2009)





# Survey Administration

- **Follow-up to a survey we conducted in May 2008**
  - Exploratory in nature
    - Wanted to know what online testing tools public agencies currently use
- **Survey was emailed to public agencies that have worked with CPS**
  - 3,350 emails were sent to valid email addresses
  - 689 respondents
  - 20.6% response rate





# Demographics

## Region

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West	77.9%
Southwest	4.1%
Midwest	6.5%
Southeast	5.4%
Northeast	4.4%
Canada	1.7%

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Total (N=689)	100.0%
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# Demographics

## Job Classification/Level

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Office Assistant/Clerical	6.4%
Technician	10.6%
Analyst	28.0%
Supervisor	7.3%
Manager	30.0%
Other	17.7%
<hr/>	
Total (N=689)	100.0%





# Demographics

## Population Served by Agency

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Less than 10,000	14.5%
10,001-50,000	26.0%
50,001-100,000	22.8%
100,001-200,000	15.5%
More than 200,000	21.2%

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Total (N=689)	100.0%
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# Demographics

## Anticipated # of Recruitment/Testing Processes

	2008 N=467	2009 N=689
Less than 5	22.5%	33.2%
5-10	17.6%	18.6%
11-20	14.4%	15.8%
21-50	21.6%	16.7%
More than 50	23.9%	15.7%
Total	100.0%	100.0%



# Results

## Use of Internet Tools / Processes

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Employment Applications *	71.6%
Training & Experience Evaluations (e.g., supplemental applications) *	46.9%
Cognitive Tests (e.g., job knowledge tests) *	13.8%
Non Cognitive Tests (e.g., personality tests, biodata instruments) *	6.7%
Structured Interviews	2.0%
Work Sample Tests (e.g, typing tests, in-basket exercises) *	15.9%
Simulations / Role Plays	2.9%
Assessment Centers	4.5%

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\* Agencies that anticipate more recruitment/testing processes during 2009 are significantly more likely to use these online tools/processes.



# Results

## Use of Internet Tools / Processes

	2008 N=467	2009 N=689
Employment Applications	54.2%	71.6%
Training & Experience Evaluations (e.g., supplemental applications)	27.2%	46.9%
Tests (cognitive and non cognitive)	18.0%	20.5%



# Results

## Importance of Proctored Online Cognitive Ability Testing Now

	2008 N=429	2009 N=657
Not Important	30.5%	44.4%
Somewhat Important	30.1%	18.9%
Important	16.1%	11.3%
Very Important	8.4%	7.5%
Don't Know	14.9%	17.9%
Total	100.0%	100.0%



# Results

## Importance of Online Cognitive Ability Testing Now

	Proctored N=657	Unproctored N=639
Not Important	44.4%	63.9%
Somewhat Important	18.9%	9.4%
Important	11.3%	4.5%
Very Important	7.5%	1.7%
Don't Know	17.9%	20.5%
Total	100.0%	100.0%

Agencies who recruit/test more are significantly more likely to view both proctored and unproctored testing as being more important to their agency.



# Results

## Importance of Proctored Online Cognitive Ability Testing Next 1-2 Years

	2008 N=429	2009 N=657
Not Important	12.4%	22.8%
Somewhat Important	30.5%	23.7%
Important	24.2%	16.1%
Very Important	19.1%	11.4%
Don't Know	13.8%	26.0%
Total	100.0%	100.0%





# Results

## Importance of Online Cognitive Ability Testing Next 1-2 Years

	Proctored N=657	Unproctored N=639
Not Important	22.8%	47.1%
Somewhat Important	23.7%	14.6%
Important	16.1%	5.8%
Very Important	11.4%	2.8%
Don't Know	26.0%	29.7%
Total	100.0%	100.0%

Agencies who recruit/test more are significantly more likely to view both proctored and unproctored testing in the next 1-2 years as being more important to their agency.



# Results

## How do you Plan to Utilize Online Cognitive Ability Testing Next 6-12 Months

	Proctored N=132*	Unproctored N=58**
For all written multiple-choice tests.	11.4%	13.8%
For select applicant groups/classifications	68.9%	56.9%
For small applicant groups/classifications	19.7%	29.3%
Total	100.0%	100.0%

\* Most respondents (79.91%) either did not plan on utilizing or indicated “did not know”

\*\* Most respondents (90.92%) either did not plan on utilizing or indicated “did not know”



# Unproctored Results

- **Consensus on UIT in 2006** (Tippins et al., 2006)
  - “In high stakes situations, UIT alone is never acceptable”
  - “Some form of verification testing is needed following high stakes UIT”
  - “Neither the extent of cheating nor the effects of cheating deterrents (e.g., warnings) is known”
- **Benefits**
  - Cost efficiency: proctors do not need to be hired and trained; no testing equipment needed
  - Job candidates do not have to travel; can reach a broader pool of candidates
- **Drawbacks**
  - Concerns over candidate cheating
  - Identity authentication of candidates
  - Test content exposure
    - Computerized Adaptive Testing (CAT)



# Results

## Tool / Processes Agencies Would Consider Administering Online

	Proctored	Unproctored
Employment Applications	15.7%	74.3%
Training & Experience Evaluations (e.g., supplemental applications)	20.7%	60.5%
Cognitive Tests (e.g., job knowledge tests)	60.7%	14.4%
Non Cognitive Tests (e.g., personality tests, biodata instruments)	27.3%	16.7%
Work Samples (e.g., typing tests, in-basket exercises)	55.5%	15.4%
Simulations / Role Plays	38.6%	5.8%

N=521



# Results

## Rank of Importance of Factors Associated with Online Testing by Region

	Cost	Time	Administrative Flexibility	Defensibility / Legal Considerations	Test Security	Up-to-Date Technology
West (N=406)	1	4	5	2	3	6
Southwest (N=19)	1	4	5	2	3	6
Midwest (N=38)	3	4	5	1	2	6
Southeast (N=27)	2	4	4	1	3	6
Northeast (N=23)	2	4	5	1	2	6
Canada (N=8)	5	3	3	2	1	6
Total Sample (N=521)	1	4	5	2	3	6



# Results

## Rank of Importance of Factors Associated with Online Testing by Anticipated # Recruitments/Testing Processes

	Cost	Time	Administrative Flexibility	Defensibility / Legal Considerations	Test Security	Up-to-Date Technology
Less than 5 (N=169)	1	4	5	2	3	6
5-10 (N=102)	1	4	5	2	3	6
11-20 (N=82)	2	4	5	1	3	6
21-50 (N=89)	1	4	5	2	3	6
More than 50 (N=79)	3	4	5	2	1	6
Total Sample (N=521)	1	4	5	2	3	6



# Economy & Online Testing

- **Of those agencies using Training & Experience Evaluations (T&Es), 19.6% have increased the use of this tool in the recruitment process due to the current state of the economy**
- **Of those agencies that have made changes to their testing/recruitment functions:**
  - 34% have implemented changes until their agency's financial/economic situation improves
  - 21% have implemented changes as long term solutions regardless of their agency's financial/economic situation
  - 36% responded that they did not know whether the changes were short- or long-term







# Issues / Solutions

- **Too many applicants – realistic job preview and customized information**
- **Technology issues – proper training of HR staff to effectively implement online testing**





# Conclusions

- **As agencies experience an increase in the number of applications received for job openings, it is important that the right selection/recruitment tools are being utilized to attract the most qualified candidates.**





# Questions?

- Questions?
- Thank You!



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# References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1999). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.
- Chapman, D.S. & Webster, J. (2003). The use of technologies in the recruiting, screening, and selection processes for job candidates. *International Journal of Selection and Assessment*, 11, 113-120.
- Cober, R.T., Brown, D.J., Blumental, A.J., Doverspike, D., & Levy, P. (2000). The quest for the qualified job surfer: It's time the public sector catches the wave. *Public Personnel Management*, 29, 479-496.
- Equal Employment Opportunity Commission, Civil Service Commission, Department of Labor, & Department of Justice. (1978). Uniform Guidelines on employee selection procedures. *Federal Register*, 43, 38295-38309.
- Fallaw, S.S. & Solomonson, A.L. (2009) 2009 Global Assessment Trends Report.  
[www.previsor.com/resources/gat/2009](http://www.previsor.com/resources/gat/2009)
- Kim, S. & O'Connor, J.G. (2009). Assessing Electronic Recruitment Implementation in State Governments: Issues and Challenges. *Public Personnel Management*, 38(1), 47-66.



# References

- Lievens, F. & Harris, M.M. (2003). Research on Internet recruitment and testing: Current status and future directions. In C.L. Cooper & I.T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol.18). New York: Wiley.
- Mooney, J. (2002) Pre-employment testing on the Internet: Put candidates a click away and hire at modem speed. *Public Personnel Management*, 31(1), 41-51
- Piotrowski, C., Armstrong, T. (2006). Current recruitment and selection practices: A national survey of Fortune 1000 Firms, *North American Journal of Psychology*, 18(3), 489-496.
- Rynes, S.L., Bretz, R.D., & Gerhart, B. (1991). The importance of recruitment in job choice: A different way of looking. *Personnel Psychology*, 33, 529-542.
- Society for Industrial and Organizational Psychology. (2003). *Principles for the validation and use of personnel selection procedures* (4<sup>th</sup> ed.). Bowling Green, OH: Author.
- Tippins, N.T., Beatty, J., Drasgow, F., Gibson, W.M., Pearlman, K., Segall, D.O., & Shepherd, W. (2006). Unproctored Internet testing in employment settings. *Personnel Psychology*, 59, 189-225.