Technology Trends in Testing

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Introduction

Today's panel explores advances, issues, and future trends in technology-based assessment

- ***Weiner:*** ***Survey the landscape - How has technology helped and what new issues are raised?***
- ***Klion:*** ***Technology provides solutions but not answers: considering non-proctored assessment***
- ***Fetzer:*** ***Advanced technology applications: Simulations & CAT***

Technology-based Assessment: Advances & Issues

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Four Questions Examined

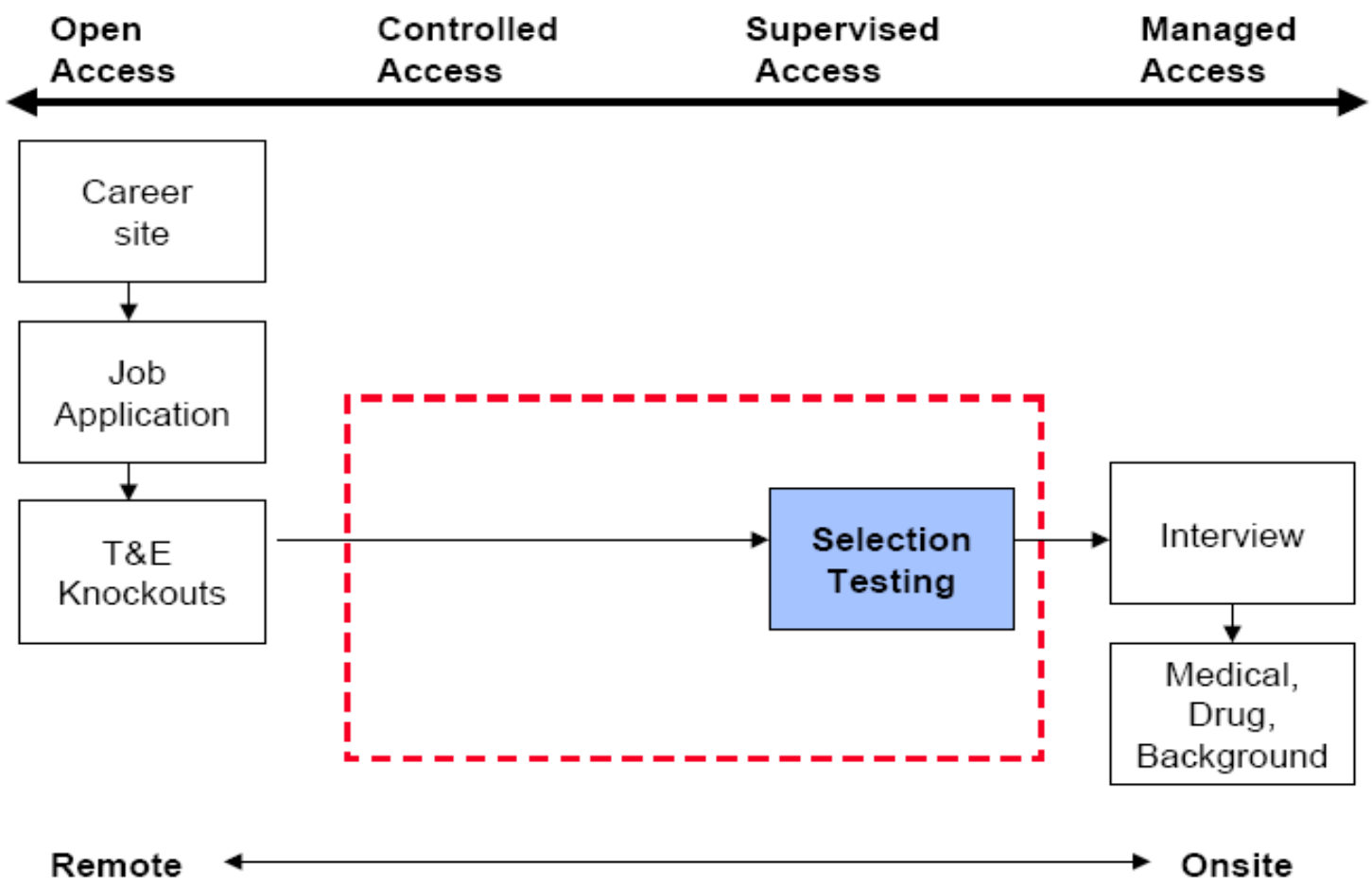
1. *How has technology transformed assessment practice?*
2. *How has technology helped?*
3. *What new issues are raised?*
4. *What are future practice and research needs?*

How Has Technology Transformed?

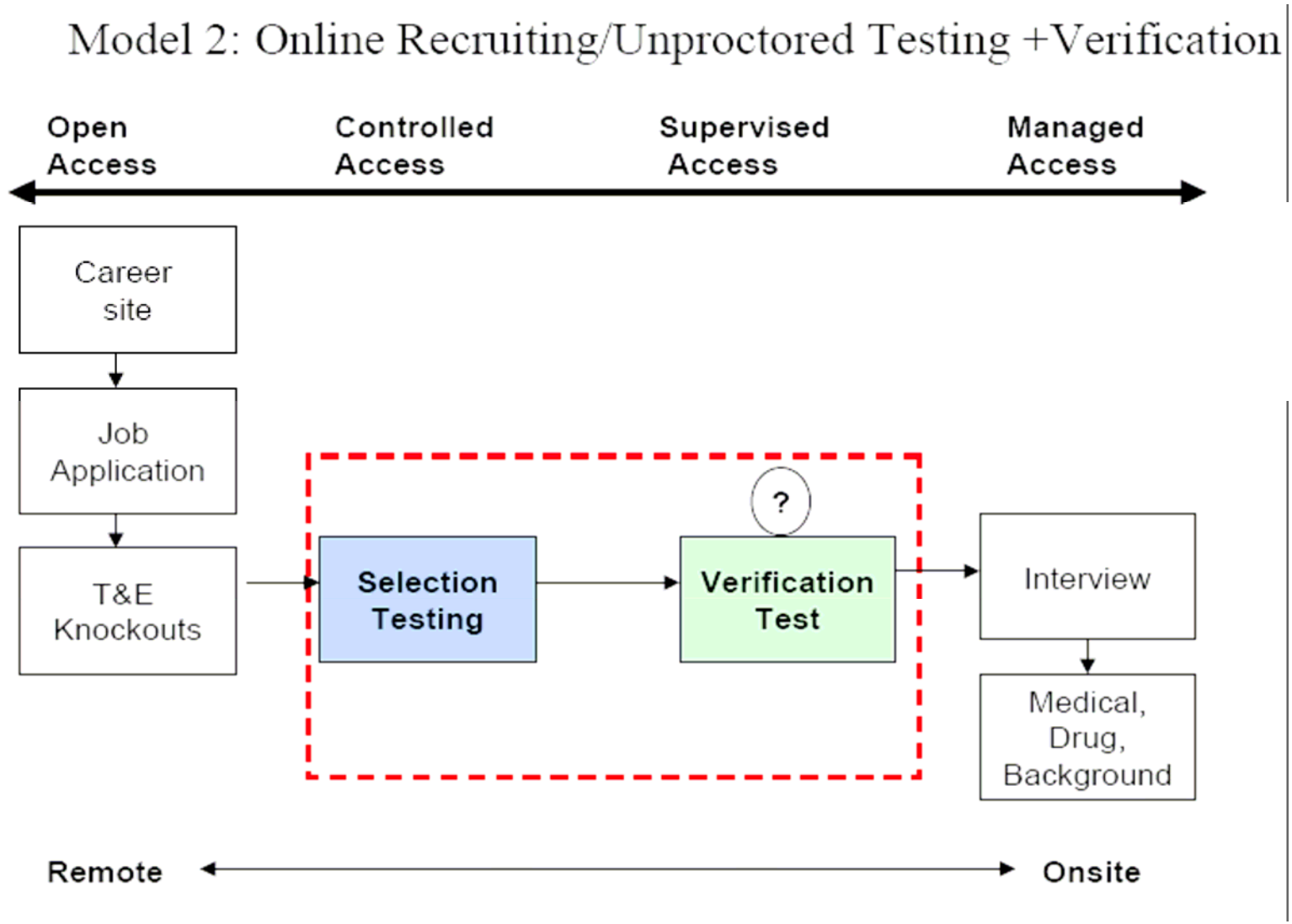
- *Assessment = Software*
  - Test development includes IT
  - Software features integral in test design, validation, norming
- *Process Automation*
  - Changing roles: developer, proctor, HR manager, candidate
  - Self-service: application, registration, examination
- *System Integration*
  - Assessment information now linked to multiple systems & reused
  - Strategic program management - analyze, plan, optimize
- *SaaS: hosted software accessed via Internet*
  - Pay-as-you-go – access to best practices once reserved for elite
  - Remote deployment – new assessment models (“unproctored”)

Technology-enabled Models

Model 1: Online Recruiting/Proctored Testing

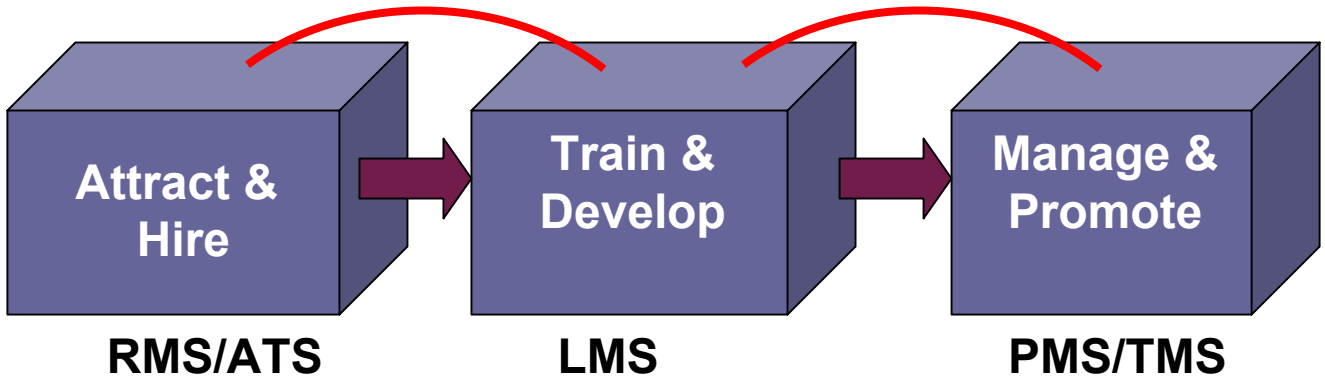


Technology-enabled Models



System Integration

- *Multi-purpose assessment information, bridging silos*
  - e.g., recruitment, selection, training needs, coaching, succession planning



- ***RMS Recruitment Management System***
- ***ATS Applicant Tracking System***
- ***LMS Learning Management System***
- ***PMS Performance Management System***
- ***TMS Talent Management System***

Competency model

How Has Technology Helped?

- *Time & Cost Efficiency – expected*
  - **Eliminate manual processes**
  - **Shorter cycle times (time-to-hire)**
  - **Efficient delivery & maintenance**
  - **Scalable, on-demand**
- *Standardization, Accuracy*
  - **Administration time, sequence, scoring**
  - **Consistency across remote business locations**
- *Power*
  - **Complex assessment methods feasible**
- *Security*
  - **IP protection – random forms, reduced exposure**
  - **Combat cheating – data forensics**

What New Issues are Raised?

- *Testing environment*
  - More complex to manage & support
  - Variations in conditions may affect performance & perceptions
- *Security*
  - Unproctored online exams risk exposure, loss of IP, cheating
- *Privacy*
  - Risks of loss, theft, unauthorized use of personal data files
- *Digital divide*
  - Subgroup differences in access, although improving
- *Legal*
  - Casting broader net not always good; record keeping for “applicants”
- *Cross-cultural adaptation*
  - Technology-enabled delivery increases risk of misuse, measurement challenges

Conclusions

- *Technology advances have led to dramatic changes in testing practice*
  - Automation and AI
  - Alternative delivery models
  - Integrated systems, strategic HR
- *Best practices are evolving*
  - Professional standards and principles provide little guidance re: technology-based assessment (AERA et al, 1999; SIOP 2003)
  - ITC (2005) guidelines outline key considerations – 4 years old
  - Need for practical guidelines on effective approaches to manage risks, maximize validity & utility

Thank you

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