Accredited Practices Using Technology

...and Other Training Tools

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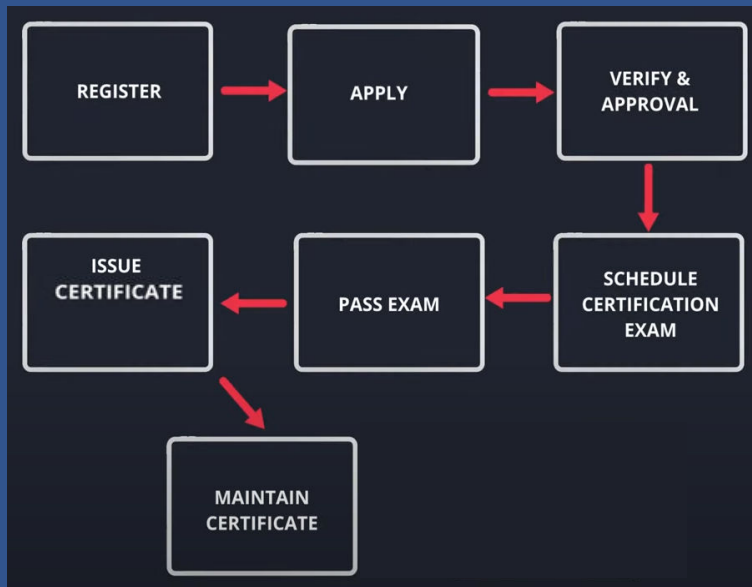# Introduction to Certification Testing Technology

- Facets of technology discussion
  - Candidate/Certification Management System
  - Assessment Development
  - Enhanced Accessibility
  - Cognitive Testing Evaluation
  - Psychomotor/Process Evaluation
  - Project/Portfolio Evaluation
  - Future Trends

Candidate/Certification Management Systems

- These systems help manage candidate data, including tracking progress, maintaining records, and managing certifications.

- Remote Registration and Scheduling: Certification candidates can register, schedule, and pay for exams online, streamlining the registration process.

- Data Analytics and Predictive Modeling: Technology is used to predict candidate success and inform certification program improvements through data analysis.

- Cloud vs On-Prem Service
  - Cost
  - Technical management
  - Security
  - Access

Assessment Development

- Item Review and Authoring Tools: Technology is used to create, review, and author test items, making it easier for subject matter experts to contribute to the certification exam development process.

- Collaborative Document Sharing
  - One Drive/Teams
  - Google Docs
  - Dropbox Paper

- Screen sharing
  - Zoom
  - Teams
  - Google Meets
  - Skype

- Costs, hardware, security considerations and technical configurations

norton

Identity Protection
✓ Monitoring Active

- Dashboard
- **Alerts**
- Freezes
- Restoration
- Monitored Info
- Plan Details

Preferences

HISTORICAL DARK WEB NOTIFICATION

Related To: dropbox.com

What We Found

Activity	Related To
Exposure of Your Data	**dropbox.com**

Description

Your personal information associated with dropbox.com was located on the Dark Web in September 2016.

Exposed Information ⓘ

Email   stevegervais@bellsouth.net

Additional Exposed Information ⓘ

Password

💬 Chat about this notification

Accessibility Features

- Accommodations for Disabilities
  - Screen Readers
  - Voice recognition software
- Multilingual Support
- User Interface Customization

Technology in Cognitive Evaluation

- Many certification exams have transitioned from traditional paper-and-pencil formats to computer-based testing (CBT)***. This allows for faster and more efficient test administration.

- In-house or commercial/educational testing centers
  - Fixed: Computer lab (desktop/laptop)
  - Portable: Tablets or laptops
  - Device and facility security considerations

- Features
  - Computer Testing Platform
    - web-based
    - software-based
  - Item Banking and Randomization
  - Dynamic Adaptive Testing
  - Automated Scoring
  - Secure Test Delivery
  - Data Analysis and Reporting

*** CBT assessment is an approved method

Technology in Psychomotor/Process Evaluation

- Simulation and Virtual Labs
  - Definition (CoAEMSP, 2022): A technique that creates a situation or environment to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions.
  - COA Opinion
  - Virtual Scenario
  - Simulators for Technical Skills
- Virtual Environments for Practical Testing...Virtual Reality
  - "The use of VR technology allows training for incidents that cannot be easily be replicated or may be very costly to recreate, not to mention eliminating the hazards involved." (USFA, 2020)
  - AR-Overlaying of computer-generated objects upon the real environment, with differing levels of interactivity.
  - VR-Complete digital experience inside a closed visual environment, that may also include outside physical elements (e.g., movement, temperature, sound, etc.)

Immersive and Simulation Technologies
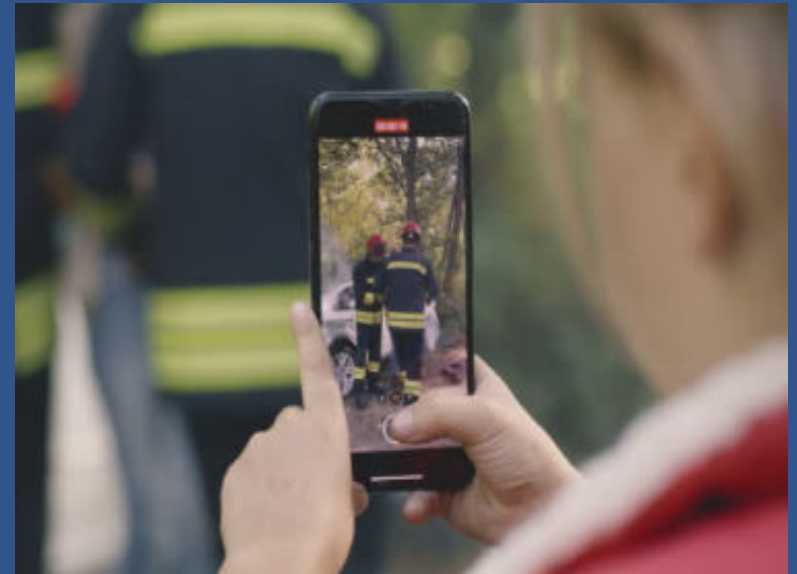
Pump VR

Hazmat VR

TEEX VR Assessment

Research "reports conclude that, in most cases, immersive learning is not currently viable as a replacement for live training. However, immersive learning environments are recommended as a very important part of blended learning and should, as technology continues to develop, evolve into a more important role." (Immersive Learning: An Important Part of Fire Service Training, NFPA, 2023)

Technology in Product/Portfolio Evaluation

- Live*** and Recorded Video
- Plagiarism/Grammar checkers
- FTP and Cloud-based file transfer/storage
  - Encrypted email
  - Secure FTP (on-prem or SaaS)
  - Secure Cloud solutions
    - Not OneDrive, Dropbox (use with caution)
    - Google Drive
    - Sync and pCloud (zero-knowledge encryption)

*** Live video assessment is an approved method

Future Trends

- Remote Proctoring

- Biometric Authentication

- Integration with Artificial Intelligence (AI) and Machine Learning (ML)
  - ChatGPT
  - OpenAI

- Mobile Apps

- Augmented Reality

Apple
Vision
Pro

Best Practices for Technology-Based Assessment

- Refrain from repurposing or directly translating a F2F program to an online assessment
- Align the technology-based assessment with the learning objectives, outcomes, and standards
- Choose the most appropriate technology tool for the assessment purpose and context.
- Research and understand technology requirements
- Address policy and/or practice adjustments
- Submit Change of Practice
- Provide clear and consistent instructions, expectations, and criteria for the assessment
- Monitor and support candidates throughout the process
- Analyze assessment data and feedback.