Leveraging Technology to Deliver a Relevant, Customized Assessment

Learning and Assessment Challenges
- Questions not relevant to practice
- Lack of performance feedback
- Limited opportunities to learn
- Time away from practice

Automated Testing Assembly Background and Use
- Automated Test Assembly (ATA) is the process of automating assessment construction through constrained optimization
- ATA helps assessment organizations overcome numerous constraints that make it difficult to build an optimal test form

The CertLink Solution

Practice-relevant assessments
- Organizations can customize the assessment experience using administrative tools
- Test takers may customize their assessment, so they are assessed on content that is relevant to their practice

Customized but optimal assessment
- Use of Mixed Integer Programming (MIP) turns assessment construction into a math problem that is then solved

Performance feedback
- Immediate feedback
- Real-time dashboard

Learning opportunities
- Adaptive learning tracks test-taker performance and feedback to deliver similar questions (clones) which help ensure test takers stay up-to-date and address knowledge gaps
- Links to additional resources for study

Online convenience
- Web and mobile apps allow for anytime, anywhere, convenient access

The Secret Sauce to Mixed Integer Programming
- MIP provides the best solution for every possible scenario when building test questions
- Constraints considered by MIP include:
  - Test-taker preferences
  - Targeted assessment difficulty
  - Distributed pool sampling

Assess for Success with CertLink

Test Takers
- Conventional online testing
- Relevant and personalized approach
- Immediate, focused feedback
- Access to resources to support learning
- Personal dashboard for progress and performance status

Organizations
- Continuous, dynamic candidate assessment
- Delivery to any personal device
- Customized assessments development
- New and emerging topics
- Performance reports and analytics

Test Questions
- Immediate feedback
- Real-time dashboard

Confidence in Answer
- MIP provides the best solution for every possible scenario when building test questions
- Constraints considered by MIP include:
  - Test-taker preferences
  - Targeted assessment difficulty
  - Distributed pool sampling

Test-Taker Preferences
- Real-time dashboard

Question Bank
- Adaptive learning tracks test-taker performance and feedback to deliver similar questions (clones) which help ensure test takers stay up-to-date and address knowledge gaps
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Test Design
- MIP provides the best solution for every possible scenario when building test questions
- Constraints considered by MIP include:
  - Test-taker preferences
  - Targeted assessment difficulty
  - Distributed pool sampling

System Preferences
- Adaptive learning tracks test-taker performance and feedback to deliver similar questions (clones) which help ensure test takers stay up-to-date and address knowledge gaps
- Links to additional resources for study

Media Library
- MIP provides the best solution for every possible scenario when building test questions
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