Designing Scalable, Objective Assessments of Interpersonal Leadership Skills

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Army Science & Technology Symposium & Showcase
22 AUG 2018

Interpersonal Leadership Skills

- Army Leaders do more than tactical decision making

- Successful Leaders
    - Motivate
    - Inspire / Influence Others
    - Build Trust
    - Develop their Soldiers
    - Create a Positive Environment
    - Communicate Effectively

- How systematically are these skills assessed, trained, and refined currently?

- Self-report
  - Easy to administer
  - Inexpensive
  - Suffer from respondent biases
  - Susceptible to "faking" and "ability to identify criteria"

- Live
  - Expert evaluators
  - High fidelity
  - Resource intensive
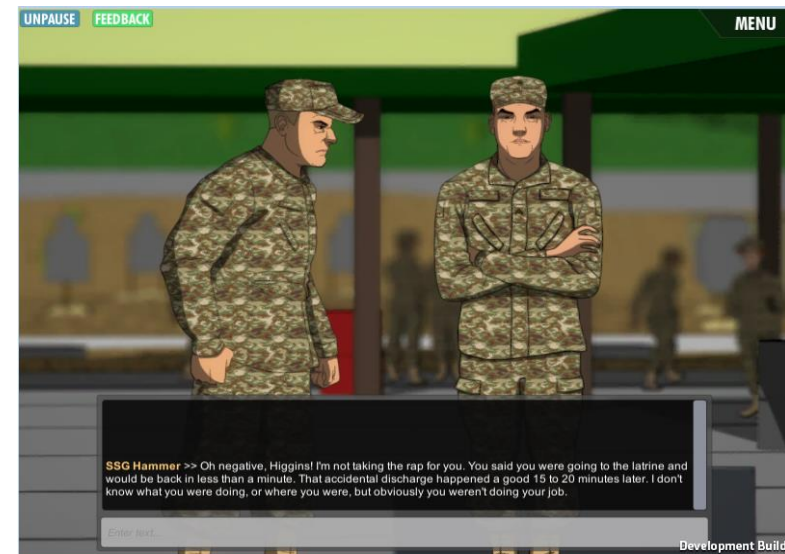
A Novel Approach to Assessment

- Scenario-Based, Free-Response Assessments
  - Computerized scenarios designed to elicit leadership behaviors
  - Inputs are made in real-time as free-text responses to unfolding conversations
  - Virtual agents react to inputs via natural language processing algorithms that assess how inputs should progress the narrative
- Live assessments made by Officer Candidate School instructors served as criterion data in validation study

Sample Scenario

- "Hand Receipt"
  - Vignettes
    - Gossiping subordinate
    - Peer pressure to sign inventory form prematurely
    - Platoon Sergeant offers to take responsibility for finding missing items
    - A Staff Sergeant berates a Private and provokes a fight
  - Targeted Interpersonal Leadership Skills
    - Creates a Positive Environment
    - Leads Others / Leads by Example
    - Builds Trust

SPC Jones >> Welcome to the platoon. Is this your first assignment?

SSG Hammer >> Oh negative, Higgins! I'm not taking the rap for you. You said you were going to the latrine and would be back in less than a minute. That accidental discharge happened a good 15 to 20 minutes later. I don't know what you were doing, or where you were, but obviously you weren't doing your job.

Initial Results

- Match rate for natural language processing algorithms reached an average of nearly 80% across all vignettes
  - Vignettes with 200 or more responses averaged 81.5%
  - Vignettes with fewer than 100 responses averaged 67.8%

- Differences in behaviors across participants
  - Within the scenarios, candidates rated highest on interpersonal leadership skills by instructors more consistently
    - Corrected unprofessional behavior
    - Offered constructive suggestions to solve problems
    - Avoided placing blame prematurely

Next Steps

- Future development for the scenario-based, free-response assessments will focus on
  - Allowing nonlinear conversations to unfold
  - Making agents more flexible by tracking emotional states, etc. across vignettes

- Identify vignettes characteristics most responsible for improved language matching and better predictive validity to improve assessment techniques overall

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