

# **Creating the U.S. Army Interpersonal Skills Assessment (AISA) Battery**

*Timothy B. Bowden*

*Micro Analysis and Design, Inc.*

*Orlando, FL, USA*

[tbowden@maad.com](mailto:tbowden@maad.com)

*Patricia Keenan and Deirdre J. Knapp*

*Human Resources Research Organization*

*Alexandria, VA, USA*

[pkeen@humrro.org](mailto:pkeen@humrro.org) , [dknapp@humrro.org](mailto:dknapp@humrro.org)

*Tonia S. Heffner*

*U.S. Army Research Institute for the Behavioral and Social Sciences*

*Arlington, VA, USA*

[tonia.heffner@us.army.mil](mailto:tonia.heffner@us.army.mil)

## **INTRODUCTION**

The future force defines the U.S. Army as it is expected to exist within the next 30 to 50 years (U.S. Army, 2002). Transformation requires tremendous advances in technology to provide the machinery and equipment that will power the future force. Just as importantly, however, the Army recognizes the importance of its Soldiers in the effectiveness of the transformation – both in terms of making the transition and working effectively within the new systems.

Along with the new systems and capabilities that will characterize the future force, the level and type of interpersonal interactions required of Soldiers will change. This trend is currently manifesting itself in military operations in Afghanistan and Iraq where Soldiers are often required to interact with indigenous military personnel and citizens and coalition forces. Soldiers act as ambassadors as well as peacekeepers.

This increased level of interpersonal interaction will continue as the Army progresses along the path of force transformation. Under the future force concepts, ad hoc teams comprised of Soldiers who may not have worked together previously will be assembled to maximize capability and effectiveness for a given task or mission. In addition, the change to Units of Action mean Soldiers will work in smaller, independent units, which increases a Soldier's dependence on a few key others and places greater importance on their interactions. Participating in such newly formed teams will require Soldiers to adapt to new team environments rapidly to ensure mission success.

Finally, the demographic composition of the future force will likely differ significantly from today's Army. It is anticipated that the future force will be a much more diverse environment than the current Army. This force will likely be comprised of Soldiers from a variety of racial, cultural, ethnic, and national backgrounds, which will require a great degree of interpersonal competence as Soldiers learn to work and live together.

The U.S. Army Interpersonal Skills Assessment (AISA) Battery will provide the Army with a method for assessing the future force Soldier's interpersonal competence. The assessments will provide a valid and reliable method for the Army to determine a Soldier's ability to interact effectively both with other Soldiers and the civilians as they carry out their duties. This paper describes the process of identifying the relevant Interaction knowledges, skills, and attributes (KSAs), developing the assessments, and planning for the validation of the battery.

## **SUPPORTING THEORY**

Each of the Interaction KSAs could be assessed using observations of actual job performance. However, it is important to remember that knowing what to do and having the skill to use the knowledge are not the same things. The difference between actual performance and skill as assessed by tests is that the performance context adds additional sources of variation that skill assessments control [personal communication, John Campbell, 2003].

Variance in skill level as assessed in a standardized measurement procedure is a function of general cognitive aptitude, procedural knowledge relevant for the skill, and a variety of dispositional variables (e.g., personality) that are viewed as stable traits (Campbell, McCloy, Oppler, & Sager, 1993). Personality plays a role because it may constrain or enhance interpersonal skills. The same is not true for standardized assessments of technical skills. One could "know" how to behave in a particular situation, but have difficulty doing it, even in a role play, because of constraints imposed by one's "personality". Fig. 1 presents the hypothesized interaction of general cognitive aptitude, personality, knowledge, and skill on performance. The solid lines are the hypothesized direct effects. The dashed lines are residual direct effects that *could* occur. For example, general cognitive aptitude could have a residual effect on skill level, or on performance, even after its direct effect on knowledge is accounted for.

To examine those effects in the final AISA, two additional measures will be obtained during validation efforts. First, the Armed Forces Qualification Test (AFQT) scores for each participant will be obtained and used as a test of general cognitive aptitude. Second, a personality assessment constructed of items from the International Personality Item Pool (IPIP) will be administered to identify the effects of personality traits on the interpersonal skill measures.

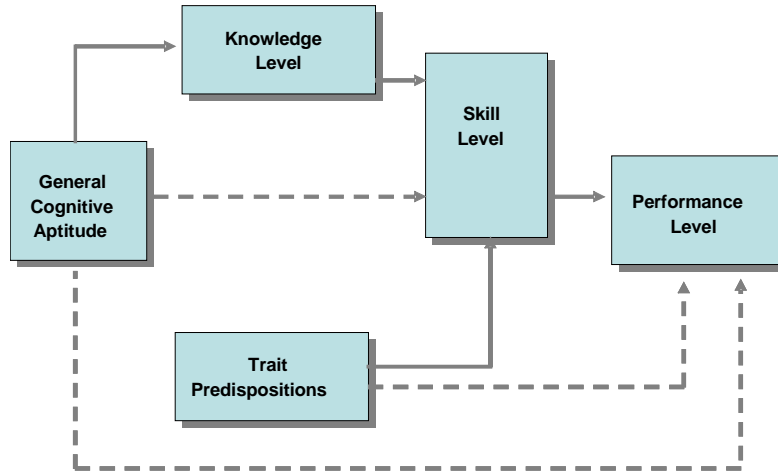


Figure 1. *The hypothesized effects of general cognitive aptitude, personality, knowledge, and skill on performance.*

## **IDENTIFYING INTERACTION KSAs**

While we relied to a great extent on job analysis information about the future gathered in other ARI projects (Ford, Campbell, Campbell, Knapp & Walker, 2000; Knapp et al., 2002; Sager, Russell, Campbell, & Ford, 2003), we also conducted a literature review to further define the Interaction KSAs (Bowden, Laux, Keenan, & Knapp, 2003). We identified the dimensions most relevant to the current task and developed a taxonomy of Interaction KSAs, presented in Table 1.

*Table 1. Interaction KSAs of the AISA Battery*

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Ability to Relate to and Support Peers

Adaptability/Flexibility

Amicability

Concern for Soldier Quality of Life

Conflict Management

Cooperativeness in Problem Solving

Coordination

Cultural Tolerance

Dependability

Helping Others

Modeling Effective Performance

Oral Communication

Social Perceptiveness

Task Leadership

Team Orientation

Written Communication

## **THE AISA BATTERY**

The AISA battery will be administered in two stages. Stage 1 consists of knowledge measures of the Interaction KSAs and Stage 2 requires examinees to demonstrate interaction skills in a more realistic setting. The Stage 1 assessment will consist of a situational judgment test (SJT) variant, along with an existing biographical data instrument both designed for machine administration and scoring. Stage 2 will include a leaderless group discussion and a semi-structured interview that will be video taped for later scoring by a trained assessor. The cornerstone of the project will be the leveraging of emerging technology in computer graphics and simulation to provide the assessment materials to examinees via computer. The assessment will utilize computer simulation and exercise development templates to provide stimuli to test takers and allow for easy administration, scoring, and adaptation of the exercises to a variety of environments.

## Scenario-Based Interpersonal Skill Evaluation

The showcase piece of innovation in the AISA is the SJT-variant that we call a Scenario-Based Interpersonal Skill Evaluation (SBISE). In this assessment, Soldiers are presented with a computer-animated situation (see Fig. 2) to which they are asked to respond. For example, the examinee views an animation of a group of students or colleagues working together to complete an assigned project. As the scenario progresses, the video is stopped and the examinee is tasked to respond to a variety of assessment items. Unlike traditional SJTs where the examinee is asked only to identify the best course of action in a given scenario, the scenario-based assessment can ask the examinee to identify the salient facets of the situation (e.g., tension, status differences between actors), likely outcomes given certain actions, factors to consider in deciding how to respond, or pros and cons of various actions to take. Sample questions from the scenario-based assessment include:

- Based on the actions of Jorge in the previous scenario what word best describes his emotions?
- What things should Michelle be concerned about when deciding how to respond to Jennifer?
- What are the most likely outcomes from each of the following courses of action you could take based on the previous scenario?

The animations will be displayed in a custom designed user interface that will provide examinees with standard video controls as well as providing the functionality for them to select or input their response to each assessment item. Underneath the interface, a software program will capture the responses and store them for scoring and report generation and update them to a database where all individual scores on the action exam will be stored. The scenarios are similar to SJT scenarios, but provide more explicit nonverbal cues that would be relevant to interpreting the problem situation. The scenario-based assessment offers the opportunity to assess knowledge areas that cannot be easily assessed with other measures such as one's ability to interpret visual cues about someone's emotional state.



Figure 2. Animation screen from Scenario-Based Interpersonal Skills Evaluation

This is a unique method of measuring an individual's interaction skills. It can capture information that is different than that identified in a more traditional situational judgment test, even though both tests might tap the same KSAs. By providing the ability to assess aspects of interpersonal skills such as identifying specific characteristics of an emotional response, or recognizing the behaviors and expressions that indicate the presence of a certain emotion the Scenario Based Interpersonal Skills Evaluation will provide unique insight into Soldier's interpersonal dimensions.

## **Biodata Measure**

Recent emphases in biodata research have been on the understanding of the constructs underlying biodata measures (Stokes, 2001). Instead of empirically determining which sets of biodata items might distinguish between job incumbents who perform well and those who do not perform well, the goal is to write items targeted to specific KSAs required for successful job performance. Biodata items have two essential characteristics: (a) people are asked to recall and report behavior and experiences, and (b) items refer to behavior and experiences occurring in specific situations to which individuals are likely to have been exposed. For example, if the KSA required is achievement motivation, a biodata item might consist of the question, “How important was it for you to get A’s in school?” A question for the same domain but tailored to an adult might be “How important has it been to you to receive excellent performance evaluations on your job?”

A biodata instrument will provide valuable information about interaction KSAs. Therefore, we are considering adapting the relevant subscales from a rational biodata inventory currently being developed in and used for other future oriented Army programs (Kilcullen, Mael, Goodwin, & Zazanis, 1999).

## **Semi-Structured Interview**

Stage 2 of the AISA includes a semi-structured interview, such as was developed for a previous ARI project, Maximizing Noncommissioned Officer Performance for the 21<sup>st</sup> Century (NCO21)(Knapp et al., 2002). This interview is composed of experienced-based questions that ask the respondent to “Tell me about a time when you....” Interviewees describe the situation, how he/she behaved in the situation, and the result of the action.

The semi-structured interview uses a standard protocol for conducting the interview, selecting questions from a question bank, developing new questions, and evaluating interviewees in several target areas. Basic components of the interview include: (a) a question bank, (b) target area definitions, (c) anchored rating scales for each of the target areas, (d) instructions and worksheet for developing questions to supplement the question bank, and (e) a worksheet on which to record and consolidate ratings from the interviewees. During the interview, a Soldier is asked a number of questions by a panel of two or more senior NCOs. These NCOs then use the anchored rating scales to assess the Soldier’s performance in the interview. Each rating scale ranges from 1 (low effectiveness) to 7 (high effectiveness) and contains three anchor levels (i.e., low, moderate, and high). Each anchor includes a brief description about behavior demonstrated at that level and several behavioral examples of what the interviewee might describe in his/her response.

## **Leaderless Group Discussion**

In a leaderless group discussion (LGD), small groups of participants are given a job-related problem to solve or a job-related issue to discuss. In the AISA LGD exercise a group of Soldiers will be presented with a task such as planning a vacation within time and budget

constraints. In the LGD each member of the group receives different pieces of information that must be considered to reach the optimum solution; some of these pieces of information are known to all participants and others are known by only one person. We have developed three LGD exercises, varying in complexity and by the amount of cooperation elicited. In the “Community Center” exercise, participants must decide upon the best location for a new city building. The optimal answer can be discovered only if all participants are willing to share their information and to incorporate all the pieces in the final decision. We will videotape the interactions, and send them to trained judges for scoring. Each individual will be scored on the extent to which they effectively display such skills as peer leadership, conflict management, team orientation and cooperativeness in problem solving.

### **Writing Skill Assessment**

It is very important to ensure that both the information and intent of a written message are both clearly communicated. Increasingly, people are communicating via email and this is expected to be the case for the future Soldier as well. It is an easy-to-use medium that allows immediate communication from a distance. A significant danger associated with this medium of communication is that the reader often misconstrues written messages because the message does not have the context present in a face-to-face conversation. There are no vocal tones, no nonverbal behaviors, or facial expressions to give cues about whether something is said in jest or sarcastically, or whether the sender really intended to say something unpleasant. This is one of the reasons that from the early stages of email development, conventions (“netiquette”) were developed to help put a voice to the written word. These conventions include such things as emoticons (e.g., smiley or frown faces) and not using all capital letters (which indicates shouting).

The test of written communication will assess the clarity of a message, both in content and tone. This test will *not* assess technical writing skills such as punctuation, grammar, or vocabulary. Two approaches to assessing writing skills will be taken in the written communications test. First, some items will ask examinees to evaluate an email exchange and make judgments about the clarity of message in terms of tone and conveying specific points. In other items, examinees will be asked questions concerning the sequencing of content within an email and how to best achieve message clarity in the sample messages. A sample item from the test of written communication skills is shown in Figure 3.

PFC Jamie Saunders is the unofficial chair of an unofficial committee that wants to buy a DVD player to use with the TV in the lobby of their enlisted quarters. He writes this note to the sergeant who is in charge of the building.

SGT Griffith,

- 1) Everyone in our quarters wants to have a DVD player to use with the TV in the lobby. 2) Some of us who live here have taken up a collection to buy a DVD player. 3) We can get a good DVD player at the PX for the money we have collected. 4) The DVD player could be stored at the reception desk and checked out by anyone who lives in the building whenever they want to look at a DVD. 5) Some people have said they would also like to contribute to

a collection of DVDs that could be stored with the DVD player and checked out, too. 6) Can we have a DVD player to use with the TV in the lobby of our quarters? 7) Let me know if this plan is OK. 8) I want to buy the DVD player as soon as possible.

1. What is the purpose of PFC Saunders' note to SGT Griffith?
2. Which sentence would make the best opening sentence for the note?
3. Which sentence(s) should be deleted to make the note more effective?
4. What is the best order of sentences to communicate most effectively?

Figure 3 *Sample Written Communications items*

### **Criterion Measures**

Current plans call for the researchers to conduct a criterion-related validation of the AISA Battery with a sample of between 100-200 Soldiers. For the study, we will use performance rating scales as the primary criterion measure. These scales will assess the Interaction KSAs. The scales will include both summary statements of performance levels and behavioral examples to make it easier for raters to understand the intent of each rating scale. The summary paragraphs (anchors) provide a snapshot description of Soldier behavior representing three levels of performance. The high anchor, in the rightmost column, describes the performance of a Soldier who excels in that dimension. The middle anchor describes the performance of a Soldier who does his/her job adequately but does not always perform at the highest level. The low anchor, in the left column, describes a Soldier who is performing poorly or failing to perform in the dimension. The behavioral examples are designed to provide additional pieces of information about Soldier behavior at the various levels of effective performance to improve rater accuracy. The rating information will be obtained by surveying the Soldier's direct supervisor and compared to ratings of interpersonal effectiveness as obtained by the AISA assessment battery.

### **CONCLUSION**

The AISA represents a unique innovation in the measurement of one's ability to interact with others effectively. The battery presents the Army with the opportunity to gauge a Soldier's ability to function effectively both in teams with other Soldiers and in interactions with civilians and coalition forces encountered in future deployments. By providing a valid method for determining a Soldier's ability to interact with fellow Soldiers and civilians the Army Interpersonal Skills Assessment battery opens new avenues for professional development, team composition and unit or duty assignment for Army personnel.

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