Tailoring Teaching to Individuals
How aptitude interacts with language instruction method

Objective
To optimize language training by tailoring instruction to learners’ aptitudes.

Definition
Aptitude-by-treatment interaction (ATI) is the relationship between a learner’s cognitive abilities (aptitudes) and an instructional method (treatment). The effectiveness of a method may depend on a learner’s aptitudes. We are using an ATI research design to examine the interactions between a treatment and a learner’s aptitude.

Expected Findings
We expect that learners who are matched to an instructional treatment based on their language aptitude profile will achieve higher proficiency more quickly than learners who are not matched to a treatment. Furthermore, we expect to learn which cognitive abilities to focus on when we individualize training. For example, if individuals with fast processing speed and strong working memory—memory that allows one to temporarily store and use information—are matched to a fast-paced, language-immersion environment, they will likely learn quickly.

Relevance
Understanding the interaction between language aptitudes and instruction methods will provide useful information for training decisions. Government officials may use the findings to determine who is likely to progress very rapidly at the beginning proficiency levels, or how much and what kind of training (e.g., immersion vs. classroom) would be necessary to get an individual to higher proficiency. The potential predictive capability will increase the efficiency and success of U.S. government language training programs.

Reports & Products
- Tailoring instruction to individual differences (February 2011)
- Language Aptitude Profile card (March 2011)

For More Information
U.S. Government Point of Contact
Maj. Steve Chang
Operations Officer
U.S. Army
(703) 704-3915 | steve.j.chang@us.army.mil

CASL Principal Investigators
PI: Catherine J. Doughty, PhD, Area Director
Co-PI: Scott R. Jackson, PhD, Assistant Research Scientist
University of Maryland Center for Advanced Study of Language
(301) 226-8828 | cdoughty@casl.umd.edu | www.casl.umd.edu