

Assessing Potential for Learning:  
A Factor-analytic Study of a Performance-based Identification Protocol for Young,  
Socioeconomically Disadvantaged High-ability Learners  
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This factor-analytic study of a performance-based identification protocol for young, socioeconomically disadvantaged high-ability learners concerned an investigation into an attempt to identify high-ability learners among a sample of students with uneven profiles across ability and achievement – each of these measured by usual testing instruments. A group-administered, performance-based set of instruments was designed in a joint project between the Center for Gifted Education and the State Department of Education, South Carolina. These instruments went through a series of processes of review and refinement leading to their use in a field test in fall 1999. The outcome of this fall administration is the subject of exploratory and confirmatory factor analysis directed first to establishing the credibility of the Project STAR instruments, and secondly to investigating whether the instrument could be shown to have identified high-ability learners regardless of gender, ethnicity, and especially regardless of socioeconomic status.

Reliability of the instruments was established on the pilot study statistics which were gathered from a heterogeneous sample. Statistical anchoring using linear transforms was used to address the status of the two forms of the test instruments. Exploratory factor analysis on a randomly chosen half of the field test data lead to structural equation modeling of both a priori and exploratory factors on the second half of the field test data.

The factor analyses showed the effect of complex interactions. All emergent factors accounted for less than a majority of the variance in the relevant sub-samples. Nonetheless, the structural equation models demonstrated that there was no evidence of bias on the basis of gender, ethnicity, or socioeconomic status. Project STAR did indeed exhibit the ability to discriminate among young, socioeconomically disadvantaged high-ability learners.