

# Did You Know? Assessment

Courtesy of NAGC Research and Evaluation Network

## Structural Equation Modeling

*Structural Equation Modeling can be useful in evaluating assessments across diverse groups.*

The ability of an assessment to measure something about a respondent is limited if diverse respondents interpret items differently. Multigroup structural equation modeling (SEM) allows researchers to assess whether items in an assessment measure underlying constructs in the same way across different groups (i.e., whether *measurement invariance* is displayed). Several recent studies use this technique to assess invariance of measures across subgroups, including cultural groups (Li, et al. 2009, analyzing the Gifted Ratings Scales-Short Form), age and school forms (Kuhn & Holling, 2009, in an analysis of divergent thinking measures), gender (Kuhn & Holling, 2009; Immekus & Miller, 2010, in an analysis of the Kaufman Adolescent and Adult Intelligence Test), and urban/rural location (Guo, Aveyard, & Dai, 2009, in an analysis of the Chinese Intelligence Scale for Young Children.)

## Creativity

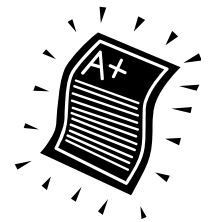
*Creativity can be measured in gifted students.*

Treffinger (2009) comments on the progress of research in measuring creativity since Khatena's 1982 response to the myth that creativity cannot be measured. Treffinger suggests that it is important to first obtain a focused and constructive definition and purpose of creativity and to use appropriate measures to assess creativity. Treffinger challenges readers to focus on creating and implementing appropriate interventions that will nurture the often unique creativity within each student instead of spending efforts in trying to "diagnose" creativity.

## Gifted Rating Scales-School Forms

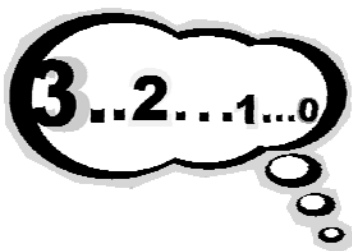
*Cross-cultural factor structures show GRS-S is consistent across cultures.*

When administered in the United States, Puerto Rico, China, South Korea, and Turkey, the Gifted Rating Scales – School Form (GRS-S) and its translated versions have equivalent factor structures. Additionally, there is evidence that the six subscales are interpreted similarly across the five locations.



## References

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- Immekus, J. C., & Miller, S. J. (2010). Factor structure invariance of the Kaufman Adolescent and Adult Intelligence Test across Male and Female samples. *Educational and Psychological Measurement, 70*, 91-104. Doi: 10.1177/0013164409344491
- Kuhn, J.-T., & Holling, H. (2009). Measurement invariance of divergent thinking across gender, age, and school forms. *European Journal of Psychological Assessment, 25*, 1-7. doi: 10.1027/1015-5759.25.1.1
- Li, H., Lee, D., Pfeiffer, S. I., Kamata, A., Kumtepe, A. T., & Rosado, J. (2009). Measurement invariance of the Gifted Rating Scales—School Form across five cultural groups. *School Psychology Quarterly, 24*, 2009, 196-198. doi: 10.1037/a0017382
- Treffinger, D. J. (2009). Myth 5: Creativity is too difficult to measure. *Gifted Child Quarterly, 53*, 245-247. doi:10.1177/0016986209346829



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