



ACET, Inc.

Action Consulting and Evaluation Team

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Issue 2

Dear Friends,

We want to introduce the newest member of ACET, **Marcel Montañez**. Mr. Montanez has been recognized internationally for his research in risk and resilience in at-risk children and families and specializes in applied family and child developmental research and evaluation. In particular, Marcel will be providing services in the following areas:

- Helping agencies meet the needs of the **Latino children and families**.
- Creating and managing **large-scale data systems** that may include longitudinal analysis using Structural Equation or Hierarchical Linear Modeling techniques.
- Working with agencies to **build research infrastructures** and answer scientific questions through evidenced-based protocols.
- **Providing workshops** that result in the increased knowledge of evaluation research for program coordinators and staff.

Marcel can provide recommendations, and organize activities that will result in 1) scientific evidence of program effectiveness, 2) continual improvement in client services, and 3) maintenance of positive communicating between organizations and their stakeholders.

We are very fortunate to have him join our team. Marcel is a great asset for ACET and resource for clients. Please feel free to contact our office at (952) 922-1811 if you would like to schedule an initial meeting with him or to discuss potential projects.

Sincerely,

Stella SiWan Cheung
President and CEO

**Make sure to look
on the back for this
issue's research
article!**

**Check out our new email
addresses!**



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TRIVIA! Where do butterflies go when it rains?

"Butterflies don't just prefer sunny days. They need sunlight in order to regulate their body temperature. Whether it's raining or not, when the sun is obscured or the sun sets, butterflies fly for cover. When a butterfly is resting, the teardrop configuration of the butterfly prevents rain from pooling on the wings or body, and the surfaces of the butterfly's skin do not absorb water."

- David Feldman. *Life's Imponderables*. 1999.



A Description of Scores from Standardized Tests

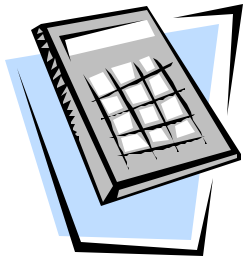
by Dr. Michael Rodriguez (ACET Partner Consultant)

Standardized test instruments yield a variety of scores, most of which are derived from raw scores (usually number correct scores). There are two broad classes of scores: norm-referenced and criterion-referenced scores.

Criterion-referenced scores: indicate how much an individual knows or what an individual can do based on predetermined criteria. This can only be accomplished if the content domain is clearly defined so that we can refer to the content domain from the score itself. For example, a criterion-referenced interpretation would be where: If you get 85 percent of the items correct, we can infer that you know 85 percent of the subject of the test.

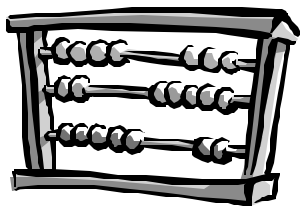
Norm-referenced scores: tell us where the individual is in terms of the performance of others in their peer population or compared to some other population, who have taken the test. The reference for the score is the norms. The interpretation directly depends on how others do on the test. It is important to note that the norms employed to make norm-reference interpretation must be recent, relevant, and representative of the sample population.

The six most commonly reported norm-referenced scores are described below.



- ❖ **Percentile** is the point on the distribution of scores below which a specific percentage of students score. If we were to say that an individual received a percentile score of 85, we could say that 85 percent of the population scored below the corresponding raw score.
- ❖ **Deviation Quotient** scores are the typical scores used for IQ (intelligence) tests. Traditionally, IQ scores were computed by measuring the mental age of the subject and dividing that by their chronological age: $\text{mental age} / \text{chronological age} \times 100$. This is not typically done these days. By employing standardized scores and rescaling, we obtain a score with a mean of 100 and a standard deviation of 15.

- ❖ **Normal Curve Equivalents (NCE)** were created by the federal government to standardize the reporting of Title I assessment and evaluation results from programs across the country employing various assessments. These scores provide an equal-interval scale that allows statisticians to perform statistics on data that require interval level scales of measurement. The NCE scores correspond exactly with the 1st, 50th, and 99th percentiles, but differ slightly between these values.
- ❖ **Stanines** were developed by the Air Force in WWII, based on the number of punches (9) that could be made in one column of an IBM punch card. These scores are normalized with a mean of 5 and standard deviation of 2. They range from 1 to 9 with the following percent of the distribution within each of the 9 stanines: 4%, 7%, 12%, 17%, 20%, 17%, 12%, 7%, 4%.



- ❖ **Grade Equivalent (GE)** scores are based on the median performance of students in various grades. Interpretation is often problematic, because if a 3rd grade student obtains a GE of 4.8, it doesn't mean that the student is performing at the level of a student in the 8th month of 4th grade (on 4th grade material). It actually means that the student is performing like a typical student in the 8th month of 4th grade on 3rd grade material based on the 3rd grade test.
- ❖ **Scaled Scores** often provide comparable results across forms at different levels for that particular assessment system. Many test publishers provide scaled scores particular to their instrument so scores can be compared longitudinally.