



ACET, Inc.

Action Consulting and Evaluation Team

Winter 2009-2010 Newsletter

Issue 28

Dear Friends,

This is a remarkable time as new initiatives and changes in policy are implemented to improve upon the well-being of families, children, and communities. ACET has many exciting plans unfolding as we move into 2010.

In the new year, we plan to roll out a new look for our website, business stationery, and business cards. We have developed a new brochure that will be available in both English and Spanish on our website. And we have developed a blog due to roll out in January that will keep clients updated on various educational resources, funding opportunities/announcements, and fun tidbits on the lives of our team. These new tools will help us to expand upon our areas of expertise and will provide a frequent, public, and interactive mode of communication with our stakeholders.



In our continuing effort to “go green,” all future issues of our newsletter will be disseminated via email semi-annually. Besides being environmentally-friendly, there are many advantages to going electronic including the ability to reach a larger audience by providing recipients with a convenient way to share our newsletter with colleagues. Furthermore, we can measure the utility and use of each issue - something we evaluators love to do!

Lastly, ACET will continue conducting community workshops free of charge to non-profit organizations seeking to develop or enhance their evaluation capacity. Check out our new blog for information on upcoming workshops!

Thank you so much for your continued support, connections to other networks, and for reading our newsletter.

Our best wishes for a joyous holiday season-

Stella, Kirsten, Heather, Joseph, and Cassie

Grant Writing Workshop

In September, Kirsten Rewey and Heather Scholz attended a “Grant Writing Boot Camp™” facilitated by Dr. Bev Browning and co-sponsored by the Minnesota Department of Education and the Minnesota Organization on Adolescent Pregnancy, Prevention, and Parenting. Dr. Browning covered popular and less utilized resources used to identify potential funders. Participants practiced writing grant applications including powerful statements of need, creation of SMART (Specific, Measurable, Attainable, Realistic, and Time bound) objectives, and linkages between the logic model and the proposal narrative. Heather and Kirsten are excited to share their new knowledge with anyone interested in strengthening their proposals. Please contact us for more information – we are excited to share what we learned with you!

Meet Cassie

Cassie Clark is the office manager at ACET who supports staff and manages our newsletters and new blog. Cassie graduated from St. Olaf College in 2007, earning a Bachelor of Arts in English and Theatre. Prior to joining ACET, she held an internship in public relations where she helped implement multiple campaigns for clients. Cassie also helped plan a large-scale walk for a nonprofit.

In the future, ACET will be disseminating the newsletter twice per year via email only. To be on the mailing list, please contact Cassie at cassie@acetinc.com

Thank You, Bob!

ACET would like to thank Bob Spencer for his many hours of hard work as an ACET intern over the last several months. Bob began his internship at ACET in May 2009 with the goal of developing his evaluation skills. Bob has worked on several quantitative and qualitative projects including data collection and analysis, focus group facilitation, key stakeholder interviews, and report writing. Bob is currently completing his Master’s degree in Applied Psychology at the University of Wisconsin – Stout. We wish Bob all the best as he completes his Master’s thesis and embarks on a bright future in evaluation, and best of luck with his upcoming move to California.

Item Response Theory: From Theory to Practice

By Joseph Curiel, M.A.

Questions:

1. What is 2 plus 2?
2. What is 2 times 2?
3. Solve for x: $x^2 - \sqrt{12,657} = 12/9$?

Obviously, the first question is the easiest of the three, the second slightly more difficult, and the third much more difficult. Let's say two people take a test with these three questions. The first person gets questions one and two right but question three wrong, while the second person gets the first question wrong but the last two questions right. By using traditional test scoring, we would add up the correct answers and report that score. In this case, the first test taker and the second test taker would get the same score.

"Wait, that's not fair," you might say. *"The first test taker got only the easier questions right and the second person got the harder questions right. Certainly the second person has a greater mathematical ability and should get a higher score."* Proponents of Item Response Theory (IRT) would agree. So what if, instead, we assign the first question to be worth one point, the second to be worth two points, and the third to be worth three points? Now the first person scores a total of three points and the second person scored a total of five points. Now we have scores that perhaps more accurately reflect the mathematical ability of the test takers. *"But wait,"* you say, *"the third question is so much harder than the first two - it should be worth more than just three points."* Again, you may be right, and again, IRT proponents would agree that the scoring scale may not accurately reflect the different information each of the items provides in measuring a person's mathematical ability.



So how many points should the third question be worth? Five points? Eight points? How can we decide? That is where an analysis based on IRT can be helpful. IRT is able to allow each item to contribute uniquely to a person's mathematical ability score by calculating the chance a person with a particular ability has of getting that item correct. Let's look at our example above. A person does not need a very high mathematical ability to be able to get questions one or two correct, but a person needs a pretty high mathematical ability to have a good chance of getting the third question correct. IRT is able to consider the probability that a person with a particular mathematical ability will get the third question correct and that the person who gets the item correct has, potentially, a higher mathematical ability than someone who got the question wrong. The same can be said about question one and question two, the latter requiring a higher mathematical ability than the former. An analysis based on IRT can estimate a person's ability by considering the test taker's responses to all three of the items, the items' varying difficulty, and the probability that a person with a particular ability would get a particular item correct. According to IRT, a person's level of ability can be mathematically related to responses on a test or other instrument.

Please know that IRT is not limited to the previous example where responses are limited to a correct or incorrect answer. IRT can also be applied to surveys with multiple response options, such as strongly agree, agree, disagree, and strongly disagree; it can even handle multiple/mixed types of response options in the same analysis. With these types of questions, an analysis based on IRT will tell the test creator if the questions on the survey are within the proposed respondent's ability levels.

As with all theories, there are a couple of assumptions to consider when determining if your survey or test could benefit from IRT analysis. First, the items in each series must measure one and only one ability. It would be inappropriate, for example, to ask *"Who is the current President of the United States?"* as a fourth item in our test of mathematical ability above. Second, performance on one item must not affect performance on another. We could not, for example, ask a test taker to *"multiply the answer to the second question by four,"* because one's response to the new item is dependent on their performance on item two. In addition, if you are intending to use IRT as the basis for your analysis, the instrument needs to have enough items measuring each ability in order to get a reliable measure of a test taker's ability being measured. Also, it can improve accuracy if the items vary in difficulty and measure a range of abilities.

Want to learn more? Subscribe to ACET's blog (coming in January 2010) at www.acetinc.com for other useful tidbits on analysis, current research, and a plethora of other topics.