

Testing the Test

Unabridged Version

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Deletions from original manuscript by journal editor shown in **cayenne**)

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Are you harming students by using an invalid Internet-based career test? At first glance, this question may seem absurd, perhaps offensive. On the other hand, you may know that numerous articles have sounded the alarm about the quality of these measures and the ethics of their use, particularly in the *Journal of Career Assessment*. This is a sensitive topic, especially challenging for many honest, well-intentioned people and organizations who want to help students. Since I am a test developer, you may also consider my writing this article self-serving. But as you read on, I believe you will agree that this is a fair question, and a disturbing one for school counselors.

The growth in the popularity of the Internet has led to a proliferation of career tests, many of them free. There are also businesses that offer schools web-related products that include career tests. Typically, they include an assessment of Holland's six personality types and relate the results to careers and college majors. They go by a variety of names like profiler, sorter, finder, test, or quiz. And, *most of them are invalid measures; there is no proof that they measure what they purport to measure.* Any test must be considered invalid unless there is evidence to show otherwise.

Invalid career tests can harm students. For a moment, imagine the effect of students getting the results of an invalid test of Holland's six personality types. Specifically, consider those students who most closely resemble the Enterprising type -- ones that like to lead and persuade people, and are good at it; who see themselves as energetic and sociable. How will they react when the test tells them they are Investigative ("*Likes to study and solve math or science problems; generally avoids leading, selling, or persuading.*")? In addition to causing confusion and disbelief, how will this misinformation affect their career exploration and decision-making? Their understanding of themselves? Their confidence in you? And, what happens to those Enterprising students who are actually misled, who pursue science or math majors or careers -- career directions that don't fit them?

Does this scenario sound far fetched? Unfortunately, it is not. **A test widely marketed to school counselors, the U.S. Department of Labor's O*NET Interest Profiler (IP), gives results just like the example above. Similarly, people taking the IP get high scores on the Artistic scale when they should get high scores on the Enterprising scale. O*NET's own research shows this. Nevertheless, many school websites**

link students and their parents to the IP website; the IP is used on well known state "Career Zone" websites; state career information systems promote it to schools and school counselors; and several companies package it in web services sold to schools.

The IP is just the tip of the iceberg. Numerous Internet career "measures" like this are widely used by students, parents, and school counselors. Compounding this problem, prominent people in the counseling field extol the virtues of these "cool career counseling tools" through websites, books, articles, and public appearances.

There are many factors to consider in selecting a career test, but none is more important than validity. In this article we will take a closer look at the IP, describe the harmful effects of using invalid career measures, review the ethical principles involved, and recommend practical tips for evaluating career tests.

An Illustration of Potential Harm: The O*NET Interest Profiler

Unlike nearly all of the career tests on the Internet, O*NET provides information about the validity of its measure, the IP -- although it is quite limited. The 57-page User's Guide includes one page on validity based on four research reports done in 1999 that can be downloaded from their website. None was published in refereed, professional journals. O*NET has not published any other studies on the psychometrics of the IP, nor has anyone else.

From these O*NET reports, you learn that the investigation of the IP's validity was limited to *one group of participants*. In this group, only ten percent were 18 or younger (most were middle-

aged); 62% of all participants were unemployed; and 22% had less than a high school education. This group, obviously, is not appropriate for investigating the validity of the IP for students in schools.

Reading further, the IP User's Guide reports that there is a "gap between the Realistic and Conventional Interest Areas"; the results from these two scales do not fit the Holland Model. In addition, the research reports show that the Enterprising and Social scales are flawed. For example, those who are primarily Enterprising are often classified as some other personality type -- like Investigative or Artistic. Similarly, a large number of individuals classified as primarily Social are misclassified as primarily Conventional, Enterprising, or Investigative. Their research shows that the computerized version of the Interest Profiler has similar problems.

Clearly, no studies have been done using the IP with students, nor is it a valid measure of Holland's personality types. This information is readily available. So why are school counselors using an invalid career test? Why are people in organizations marketing it to them? Why do they recommend other test look-alikes on the Internet? The state leader of a career information service gave this mistaken explanation, "We encourage people to use several (assessments) and to compare the results, because each survey has a different way of getting to a list of careers." Does it matter how students get a list of careers? Or, what is on the list? Yes, it does. Is a list of careers the only value that career tests offer? Are invalid tests harmless?

Harmful Effects

Counseling research has focused on the

benefits of valid career measures. To conduct a study of the harmfulness of invalid measures would be unethical. Consequently, we will probably never know the extent to which using invalid career measures is harmful. But, from our experience and thoughtful consideration, we can make some reasonable assumptions about the impact of invalid career measures.

Students are likely to vary in their response to receiving erroneous career test results. For some, it will have little or no impact. But those who are highly motivated are likely to have strong, negative reactions. We all know them: the students who are full of anticipation; looking forward to the results; eager to learn about themselves and to explore college majors and careers. Disbelief, confusion, or frustration is what they likely will experience. These negative feelings will be heightened when they are asked to apply the results to a career exploration activity, like identifying the occupations that match their high scores. For many students, invalid results are going to lower their motivation to continue. And, some students may accept the erroneous results as true and proceed accordingly -- exploring occupations or college majors that do not fit them. And, others may make important decisions based on these incorrect results. Those with low self-confidence will be the most vulnerable.

But developing a list of good career options to explore -- ones that fit your personality -- is not the only value of a valid career test. A good test gives you insight about yourself. It helps answer the question, "Who am I?" What is the impact of giving students an invalid measure telling them they are something they are not? A valid measure of Holland's theory also gives individuals

the opportunity to learn about the theory and apply it to themselves and the world about them. In the next section, for example, you will read how it can be applied to school counselors' behavior. But more to the point, students can learn how to apply Holland's theory, to understand how their personality interacts with work environments to affect their job satisfaction and success. Most of these insights are lost if students get invalid test results.

Parents, teachers, and others may become frustrated in their efforts to help guide students in their development, and their perception of school counseling diminished. And, of course, school counselors are at risk of being negatively affected. Their effectiveness in implementing their school counseling program may be lowered. Their credibility and stature among students, school colleagues, parents and the public may be put at risk. The issue of unethical practice is also raised.

Lastly, the widespread use of invalid career tests discourages researchers and test developers from developing effective career assessments. Why spend the time (often years) and expense in developing a measure when virtually anyone can create a "career measure" in a few hours time for the Internet?

Professional Role & Ethical Standards

The role and ethical standards for school counselors are clear. According to the ASCA role statement, *the professional school counselor is a certified/licensed educator trained in school counseling with unique qualifications and skills to address all students' academic, personal/social and career development needs*. One of those unique qualifications is the counselors' knowl-

edge of psychological assessment. Each has taken a course in test and measurements, or its equivalent, as a basic step in developing your competence as a professional. They are instructed to ". . . *consider the validity, reliability, psychometric limitations, and appropriateness of instruments when selecting tests for use in a given situation or with a particular client.*" (ACA Code of Ethics) and to follow, ". . . *all professional standards regarding selecting, administering and interpreting assessment measures . . .*" (ASCA Code of Ethics).

With the role and standards so clear, why are school counselors not following them? Cost? Unfamiliarity? Lack of confidence or training?

Holland's theory may shed some light on this. Many counselors most closely resemble the Social-Enterprising personality types -- across the hexagon (and basically opposite) from the Investigative type. People of the Enterprising type *generally avoid activities that require careful observation and scientific, analytical thinking* -- like, a course in tests and measurements. Often, this course is the least popular and most anxiety-provoking among students in counselor education programs. Upon graduation, there may be a strong temptation to diminish its importance and to avoid further study in the area.

Regardless of the explanation, most school counselors realize that evaluating tests is their role and responsibility, and it is crucial to students' welfare. They know how important it is to grow professionally in this area and do the hard work of analyzing the claims of test developers.

So, just how do you assess whether or

not a particular career test is valid? Follow these tips:

1. Check for a test manual and how accessible it is. Publishers and websites offering career tests should provide easy access. If they do not, be wary. If there is no manual, avoid using the test.
2. Look to see if the measure's manual cites research studies published in respected professional journals. If none exists, avoid the measure.
3. Beware of career tests that are called something else, like career quiz, profiler, sorter, or finder. If students are being asked to assess their values, interests, abilities, temperaments, or personality -- it is a career test and should meet professional standards for its validity and reliability.
4. Check carefully any career assessment to which you link students or parents, via your school website. The public does not have the benefit of your training, knowledge, and experience to judge the merits of career assessments. They depend on your professional judgment.
5. Use your professional analysis and judgment in considering testimonials, sales pitches or recommendations, whatever their origins: friends, state or national leaders, respected organizations or companies. This includes industry endorsements or certifications; their standards are often vague and depend on loose self-assessments of compliance. Ask for a professional manual to study.

School counselors have the unique and exciting opportunity to make a real difference in the lives of students: to help them learn how to make good career

decisions, ones that lead to success and satisfaction. And, there are a number of excellent Internet-based career tests that can make a solid contribution to this effort.

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Additional Information

There is also [an article for professional counselors](#) including references to studies and reports.

The Author

Lawrence K. Jones, Ph.D, is the author of The Career Key™ measure and website (www.careerkey.org), the [Self-Employment Key](#), *Occ-U-Sort*, and the [Career Decision Profile](#). More than 3 million people used The Career Key worldwide in 2007. His books include, *The Encyclopedia of Career Change and Work Issues*, selected as one of the "Outstanding Reference Sources" by the American Library Association and most recently, *Job Skills for the 21st Century, A Guide for Students*.

A National Certified Counselor, Dr. Jones is a member of the National Career Development Association, the American School Counselors Association, and the American Counseling Association. He has written extensively for professional journals, served on the editorial boards of the *Career Development Quarterly* and the *Journal of Counseling and Development*, and was a vocational expert for the Office of Hearings and Appeals, Social Security Administration. He received the annual Professional Development award of the American Counseling Association.