FROM THE PRESIDENT:
A PRIMER ON STANDARDS, GUIDELINES, AND PRINCIPLES RELEVANT TO EDUCATIONAL ASSESSMENT

Wayne J. Camara, The College Board

Today, legal, ethical, professional and technical issues form a continuum of standards that guide the development and use of educational assessments (Camara, 1997). Legal and regulatory mandates include legislation such as 'No Child Left Behind' and the 'Americans with Disabilities Act,' as well as precedents established by court decisions (e.g., GI Forum Decision) (Phillips & Camara, 2006). Ethical conduct concerning assessment is often addressed in ethics codes that range from enforceable to aspirational. Professional responsibilities generally concern the application of widely accepted principle standards of practice. Principles and standards have also been developed to educate and guide educational professionals in more technical areas of test use. All four layers of regulations and standards are increasingly prevalent in educational assessment. In this column I attempt to identify and briefly distinguish among the most relevant professional documents which relate to ethics, professional conduct and technical guidance related to educational assessment.

Ethics Codes

The American Psychological Association (APA) adopted the first formal ethics code for any profession using assessments in 1952. Eighteen of approximately 100 principles in that Code (APA, 1953) addressed issues such as qualifications of test users, security of testing materials, documentation required in test manuals, and responsibilities of test publishers and test users. Ethical standards for assessment are one of nine areas addressed by the current code (APA, 2002). Many other professional associations with members involved in assessment have similarly adopted ethical standards and professional codes in the past two decades. Increased public awareness of ethical issues, the variety of proposed and actual use of assessments, and the increased visibility and importance placed on assessments for accountability have stimulated increased attention to ethical and professional responsibilities by many professional associations (Eyde & Quaintance, 1988; Schmeiser, 1992).

In the early 1990s the American Counseling Association (ACA) and the American Educational Research Association (AERA) each approved ethical standards that cover a broad range of standards for behavior in counseling and educational research and address conduct in educational assessment to a minimal extent. Ethical standards of ACA (1998), APA, and the National Association of School Psychologists (NASP, 1997; 2000) are unique in that these associations support formal enforcement mechanisms that can result in suspension and expulsion, respectively (Camara, 1997)[1]. Ethical standards were first adopted by AERA in 1992 and twice revised. The current standards (AERA, 2000) are designed to guide the work of educational researchers but are not enforceable.

In contrast to laws and regulations that are designed to protect the public from specific abuses, ethical standards and codes attempt to establish a higher normative standard for a broad range of professional activities and behaviors. For example, APA's Ethics Principles state "if this Ethics Code establishes a higher standard of conduct than is required by law, psychologists must meet the higher ethical standards" (2002, p. 1062). ACA, AERA, APA and the Society for Industrial and Organizational Psychology (SIOP) have followed up the development of ethics codes with casebooks that attempt to guide users in interpreting and applying their standards.

Standards for Professionally Responsible Practice

Several professional associations have developed practice standards. The National Council on Measurement in Education (NCME) issued the most relevant professional code for most educational measurement professionals in 1995. NCME's Code

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[1] The National Association for College Admission Counseling (NACAC) has developed standards of practice and other policy guidelines that are enforceable to its institutional members.

of Professional Responsibilities in Educational Measurement was developed to "guide the conduct of NCME members who are involved in any tinge of assessment activity in education…[and] as a public service for all individuals who engage in educational assessment activities…such as classroom teachers, principals and superintendents; state and national technical, legislative and policy staff in education; staff in research, evaluation and testing organizations; providers of test preparation services; colleges and university faculty and administrators; and professionals in business and industry who design and implement educational training programs" (p. 1). The NCME Code lists seven general areas of expectations for members involved in assessment:

- Protect the health and safety of all examinees.
- Be knowledgeable about, and behave in compliance with, state and federal laws relevant to the conduct of professional activities.
- Maintain and improve their professional competence in educational assessment.
- Provide assessment services only in areas of their competence and experience, affording full disclosure of their professional qualifications.
- Promote the understanding of sound assessment practices in education.
- Adhere to the highest standards of conduct and promote professionally responsible conduct within educational institutions and agencies that provide educational services.
- Perform all professional responsibilities with honesty, integrity, due care, and fairness[2].

Nearly all other ethical and professional codes explicitly state that they are intended to apply only to members, while the *NCME Code* goes further in encouraging others who engage in assessment activities to endorse and abide by these principles. A number of similar standards of practice have been developed, in some instances, in combination with ethical principles, increasingly by professional associations, trade groups, and individual test publishers and users (e.g., Association of Test Publishers, College Board, Educational Testing Service, and National Association of School Psychologists). The National Association for College Admission Counseling (NACAC) has developed a set of principles (2001) that reflect ethical concerns in admissions practices and appropriate use of data from admissions tests (e.g., cut scores, multiple predictors, confidentiality of test scores, reporting of aggregate test scores for an institution). Many of the ethical codes and professional standards are designed to increase the awareness of members to what constitutes responsible behavior and ethical practice (Schmeiser, 1995).

Technical Standards

An essential component of responsible professional practice is maintaining technical competence. Many professional associations have also developed standards and principles of technical practice in assessment. *The Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999) (hereafter referred to as the *Testing Standards*) has been the most widely cited document addressing technical, professional, and operational standards for all forms of assessments that are professionally developed and used in a variety of settings. There have been four revisions to these joint standards since they were first issued as separate technical recommends for achievement tests and psychological tests by AERA and NCME in 1955, and APA in 1954, respectively. The first jointly sponsored *Testing Standards* were released in 1966 (Camara and Lane, 2006). These *Testing Standards* were designed to apply to professional test developers, sponsors, publishers and users – providing criteria for the evaluation of tests, testing practices, and the effects of test use. Technical standards or guidelines addressing college admissions, personnel selection, test translations, test user qualifications, and computer-based testing are among the numerous professional documents developed in the past decade.

An increasing number of professional associations have become concerned with technical issues in the development, use and validation of tests. For example, the International Testing Commission (ITC) has issued guidelines that address test adaptation and translation, test use and computer-based testing[3], and the Association of Test Publishers have similarly issued guidelines concerning integrity testing and computer-based testing[4]. In addition, a number of statements or documents have been issued by associations which address a narrow topic, such as the APA statement on the disclosure of test content in teaching, research, or treatment and diagnostic applications (Committee on Psychological Tests and Assessment, 1996). Several testing organizations have developed additional technical guidelines focusing on issues such as fairness, test development, or specific types of applications with assessments (e.g., ETS's Standards for Quality and Fairness, 2002).

Table 1 illustrates selected standards and guidelines concerning assessment issues that have been developed by various professional associations. This table provides a means for cross-referencing standards that have been developed on specific issues such as retention of scores or protection of confidentiality.

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[2] See Phillips, S.E. & Camara, W.J. (2006). Legal and ethical issues. In R. Brennan (ed.), *Educational measurement (Fourth Ed.)*. American Council on Education/Praeger: Westport, CT.

[3] Go to http://www.intestcom.org/guidelines/index.php

[4] Go to http://www.testpublishers.org/mc/page.do?sitePageId=112023&orgId=atpu

Table 1. *Selected Standards and Guidelines across Professional Associations*

	Standard	NCME Code	APA Ethics	NACAC	Jt Cmte Code	Jt Cmte* TTR&R	ACA Ethics	SIOP Principals	Test Stds	AERA Ethics
1	**Test Development**	1								
1.1	Protect copyright	1							11.8-.9	
1.2	Provide technical information	1			a1-7	8		x	Chapter 4	
1.3	Use psychometric techniques in TD		9.05					x	3.1-3.4, 6.5	
2	**Marketing & Sales**	2								
2.1	Define intended uses/limitations	2		3b6-9	a1-3			x	1.1-.2, 3.2, 3.4, 6.3-.4	
2.2	Reasonable fees/access	2				2b, 5				
2.3	Test Prep	2, 3		3b12					13.11	
2.4	Endorsements	2	5.06							
2.5	Limit to qualified users	2	2.01, 9.07		a8	6			11.3.	
3	**Selecting Tests**	3								
3.1	Review validity/tech doc	3	9.02	3a13a1	a2-5, b13	3a	e6b	x		
3.2	Disclose conflicts of interest	1, 3, 7-8								1b10
3.3	Select test appropriate for groups	3	9.02		a7, b9-10	4	a6b	x		
3.4	Obsoluete tests		9.08				e11	x		
4	**Administration**	4								
4.1	Inform test takers of use	4			b11	4	e3a			
4.2	Admin tests qualified to use	4	9.07				e2a	x		
4.3	Follow standardization/security proc.	4				6	e7, 310	x		
4.4	Provide reason accomodations	4			c16	3b		x		
4.5	Opportunitie for questions/appeal	4	9.04		d19-20	4				
4.6	Protect confidentiality of test taker/scores	1, 4-6	4.01-.04	3a6, 3b3		9		x		
4.7	Use in placement/course credit			3a7						
5	**Scoring**	5								
5.1	Provide info on scoring, reporting	5	9.09		b9-10	8	e9	x		
5.2	Conduct reasonable QC/correct errors	5				4,8		x		
5.3	Release of aggregate data	5		3a11, 3b13						
6	**Interpreting & Comm.**	6								
6.1	Inform test takers of use/interpretation	6	9.03	3a2, 3b7	d17-18	8	e2b, e3b	x		
6.2	Inform proper inter + limiations	6	9.1			8		x		
6.3	Eval appropriateness of norms/standards	6	9.09		a7, b9-10		e8	x		
6.4	Multiple sources of info for ed dec	6			3a4, 3b5	a2				
6.5	Avoid misleading statements, inaccur	6								
6.6	Retain scores, who gets scores	6	6.01-02		d20	4, 9	e3b, e4	x		
6.7	Report any misuse by others	6	1.05				e9			1b12
6.8	Consider student background	6	9.06			8	e8	x		
6.9	Obsoluete results		9.08				e11			
6.1	Explain cut scores				b12			x		
6.1	Not use cut scores			3a3						
6.1	Examine/report subgroup performance				c15			x		
6.1	Informed consent		3.01, 9.02	3b12		6, 9	e3			
6.1	Automated scoring/Interpretation		9.06, 9.09-10							
7	**Ed Others on use**	7								
7.1	Qualifications to communicate results	7				6	e3			
7.2	Protect secure materials	3, 7-8	9.11							
7.3	Fair and balances statements	7								1b4-7
7.4	Train staff in assessment			3a5						
8	**Evaluating Ed Programs & Research**	8								
8.1	Research on Assessment	8					e9b	x		b
8.2	Multiple courses for eval	8								
8.3	Rights of participants in research	8	8.02				g1-2			2b1-3
8.4	Attribution of others' work	8	8.12				g3			3b1g
8.5	Conduct validation studies/evidence			3a9				x		
8.6	Report criteria fairly for all students			3a8, 3b4						

* Test Developers section only

Standards for all Test Users

The *Testing Standards* were developed primarily for the test user who was considered to be a trained professional such as an educational researcher, psychologist, school counselor or local assessment director. These individuals generally had some graduate training and supervised experience in assessment and may best be termed "primary test users" because of their role and responsibilities. Today, the term test user encompasses a much broader group of "secondary test users," individuals with little or no training in measurement and assessment, such as teachers, parents, policymakers, and the media (Camara, 1997; Camara & Lane, 2006). These secondary users may have great influence over the use of assessment results and may misuse assessments (Berliner & Biddle, 1995). The further the test users are from the assessment, the less familiar they may be with the intended use of the assessment, evidence supporting the validity of inferences concerning the use of assessment results, and test content and characteristics of the test taking population, which increases the likelihood that test misuse will occur. Misuses of test data in high stakes programs abound, such as elaborate cheating operations detected by federal agencies (Educational Testing Service, 1996), questionable statements and marketing practices by test publishers (Sackett, Burris & Callahan, 1989), test preparation services that employ confederates to allegedly steal large pools of items from computer-based testing programs, use of actual secure test items for instruction, reprinting copyrighted materials without permission, make unauthorized changes to test conditions (e.g., extension of time, answering questions during testing) and falsification of test reports and answer sheets (Camara, 1997; Schmeiser, 1992).

Educational professionals in testing and measurement have struggled with how to improve proper test use and educate the increasing range of secondary test users who may have no formal training in testing. An increase in the number of standards and guidelines concerning testing has corresponded to the increase use of educational assessments for accountability purposes (Madaus, Lynch & Lynch, 2001). Technical standards and practice guidelines in assessment, developed by groups such as ACA, AERA, APA, and NCME, are primarily intended for their members. Even among members, professional standards of practice may not be reaching their entire audience. For example, the 1986 edition of the Standards had approximately 58,000 sales between 1986 and 2000, which is less than 40% of the combined memberships of the three sponsoring associations. In many instances, members of professional associations may be unfamiliar with professional standards and have little exposure to new developments in assessment use during their graduate training (Aiken, West, Sechrest, Reno, Roediger, Scarr, Kazdin & Sherman, 1990).

Efforts to guide professionals in educational measurement in the appropriate use of assessment and professional conduct remain important. However, most of these initiatives will rarely reach secondary users and decision makers who use educational assessments as the sole determinant of high stakes decisions, to reward or sanction schools based on small changes in performance levels, or to apply fixed cut points as the primary determinant of admission to college or professional schools. Haney and Madaus (1991) state that professional standards have had little direct impact on test development and even less impact on test use. They note that professional standards primarily enhance the prestige, professional stature, and public relations image of a profession rather than improve practice. Ethical practices and professionally responsible behavior are just as important in the use of assessments as they are in the development of assessments. The effects of tests cannot be divorced from the effects of testing; some of the most serious problems in testing have not arisen from shortcomings of the tests but rather from misuse of technically adequate products (Madaus, et al., 2001, p. 6).

The increased use of tests for accountability has also increased the urgency of informing and educating secondary users of their responsibilities in the appropriate and ethical use of tests and test data. In 2000, the U.S. Department of Education's Office of Civil Rights drafted a resource Guide on High Stakes Testing for educators and policy makers (2000) that attempted to interpret the technical and professional testing standards and legal principles and apply them to high stakes uses in schools, but the guide has not been disseminated since a change of administrations. *Standards for Educational Accountability Systems* (CRESST, 2002), which attempt to apply professional standards to accountability systems for a broad group of educators, have been developed after passage of educational reform law. In an attempt to reach a broader group of test users, NCME collaborated with the teacher unions to develop *Standards for Teacher Competence in Educational Assessment of Students* (American Federation of Teachers, National Educational Association, and NCME, 1990), and broadened its own Code to apply to members and persons engaged in any area of educational assessment (NCME, 1995). The NCME Code is also unique because it applies to teacher-conducted assessments and assessment support and preparation materials, as well as standardized tests; the former are excluded from the Standards and most other technical guidelines.

Most recently, the Council of Chief State School Officers and the Association of Test Publishers collaborated in establishing voluntary best practices in managing and operating state testing programs (CCSSO and ATP, 2010). By involving the major consumers and providers of large scale educational assessments, this publication may reach the secondary uses responsible for district and state testing programs. It represents an effort to improve the procurement and management side of assessment programs, as well as the delivery of services. These operational best practices focus on areas such as fulfillment, contracting, administration, scoring, reporting, and test security. The collaboration occurred following a number of widely-publicized errors and breakdowns in assessment services in the last several years.

The Code of Fair Testing Practices in Education (Joint Committee on Testing Practices, 1988; 2005) attempts to condense the most salient statements concerning the responsibilities of test users and test developers from existing codes and standards in four areas: (a) development and selection of tests; (b) administration and scoring of tests; (c) reporting and interpretation of test results; and (d) informing test takers. The Code has been endorsed by most of the major test publishers and is frequently reproduced on Web pages and publications in an attempt to guide educational professionals in appropriate practice and use of assessments. Most other technical and professional standards have a much more limited distribution, primarily to members, while the Code encourages reproduction and dissemination. A similar document, *Responsibilities of Users of Standardized Tests* (Association for Assessment in Counseling, 2003), was developed to enhance ethical standards and assist counselors in the ethical practice of testing.

It appears as though each year there is a greater number of legal, ethical and professional guidelines and standards that address educational assessment. It is difficult for NCME members to remain current as these documents appear to proliferate every decade. On the other hand it is essential that practioners remain familiar with and aware of these standards as they engage in assessment practices. Similarly, academicians need to remain familiar with these standards in order to expose their students to the substance issues addressed in various reference documents. Today, there is an increased level of accountability associated with assessment results and there is also an expectation of greater accountability among professionals who provide assessment services.

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A NOTE FROM THE EDITOR
Thanos Patelis, The College Board

In this issue we are happy to have our president's, Wayne Camara, The College Board, column offering a primer on the standards of testing across multiple sources. Additionally, we have the graduate student column by Dubravka Svetina from Arizona State University, who provides some advice on preparing a personal statement on research or a philosophy on teaching. Next, we are pleased to offer some insights from Rich Shavelson, Stanford University, thanks to the efforts of Donna Sundre, James Madison University. Finally, we have a number of important announcements both related to NCME business and other organizations. As always, please drop me an email with suggestions. Sincerely and at your service, Thanos.

GRADUATE STUDENT CORNER:
TIPS IN PREPARING A PERSONAL STATEMENT ON RESEARCH OR TEACHING PHILOSOPHY
Dubravka Svetina, Arizona State University

I hope your semesters have started off well. For some of us graduating soon, in addition to dissertating, we are likely visiting *The Chronicle* (and similar publications) on a regular basis, looking for that *perfect* job. Even if you are not graduating, I believe that it is never too early to start thinking about "what's next." Thinking about what you want to do after grad school can be helpful, because such reflections may lead you to participate in projects and research while in school.

Generally speaking, whether you are interested in an academic position, a job in industry, research center/institute, state or local department of education, or something in between, it is likely that your job application requires some sort of a personal statement. Even if the job posting does not specifically require the submission of a research statement or teaching interest/philosophy, it is likely you will discuss some aspects of these in the cover letter. In this column, I would like to share some of my experience as I am looking for a job, creating the applications, as well as some of the resources I found helpful during the process.

I recently came across an ad for an assistant professor position that stated the following:

Applicants should send the following materials: (1) a letter of application describing teaching and research interests, (2) a curriculum vitae, (3) graduate transcripts, (4) two relevant publications or scholarly writings, (5) three letters of recommendation, and (6) relevant course evaluation if available.

This particular ad really indicated to me how much work there is in applying for a job. As with many other ads that I have seen, this one asks for both research and teaching statements. Sometimes referred to as a teaching philosophy or research statement, these types of statements require reflection and significant time before they are produced. It is also important to start drafting them much earlier than you think you will need them.

Although I thought a lot about my research during the last few years, having updated my CV, and sharing my research with colleagues, I have never written a personal statement about my research interests. While I thought I knew what I wanted to write, I soon found myself searching the Web for samples statements, talking with professors and colleagues about their

process for writing them, and consulting with books and magazines for ideas and guidance. For your benefit, here are some of the main points I took away from my explorations on how best to craft a research (or teaching) statement.

Research Statement

Your research statement should convey several things.
- a) What you have been doing recently and currently;
- b) In which direction you hope to go;
- c) How your research contributes to the field.

Dr. Jim Pawelczyk from Penn State University created a PowerPoint presentation on "*Crafting the Research Statement*," in which he gives a recipe for a research statement. He suggests that a research statement should have: (1) Abstract (optional); (2) background (research focused); (3) current research (key results, importance, and how it logically flows into your future goals; (4) future research agenda (short and long term goals, plans and approaches); and (5) relevance (to your field, employer, society, etc.).

These ingredients are typically found in a variety of resources that speak about how to write a research statement. While these points may be self explanatory and obvious, I think they are important to keep in mind as you are writing your statement. It is essential to communicate why your research is important, what is the context of your research interests, as well as how what you have done so far logically flows into your future research. Think (and write) about how your research in the future will be innovative, important, and different from what you have done so far. In reading about effective research statements, I found that the future research plan (3-5 year) should be credible and specific, but not too detailed. Also, include and acknowledge the work of (and collaboration with) other scholars and colleagues.

In addition to having these components for crafting a useful statement, make sure they are readable, integrated, and flow. I suggest doing the following: When you finish writing your statement, put it away, and don't look at it for a few days. Then, come back and reread your statement and make adjustments as needed to ensure it reads well and communicates clearly your point of view. After several revisions, be brave and give it to your colleagues and/or professors to read and request their feedback. I found that getting feedback from my professors has been a great way to improve my statement. They are able to point out things that I missed or aspects that I can improve - which I wouldn't otherwise see.

If you are not able to get feedback from your professors, ask your friends or family. This can be very helpful, even if they are not in your area of specialization. My go-to person is typically my brother. When he reads my writing, he is able to point out things that are not clearly stated. Identifying unclear points or ideas is crucial, as you want to communicate your ideas precisely, carefully, and succinctly.

Lastly, proof read, proof read, and proof read again. Read your statement out loud. Don't make it too short or too lengthy. I have found recommendations that such statements should be one to three pages in length. However, it is important to make adjustments as needed depending on the requirements of the job application. As always, reread it and proofread it yet again.

Teaching Philosophy

Some job applications might also ask for your teaching philosophy. Depending on your experience, this statement might look a bit different. For example, if during your graduate work (or in your previous work) you had opportunities to teach your own class, you probably have reflected on your personal teaching philosophy – even if you had not written one down on paper. Being in a classroom may have provided you with many opportunities to reflect on who you are as a teacher. For those of us with less direct, in-class experience, writing a teaching statement may be a bit intimidating. Often, we might draw and reflect on teachers we had in the past who made an impression on us; those teachers that one day we want to become.

Reading through various materials, articles, and examples of teaching statements, I found the following general advice:

1. Tailor it to the institution;
2. General is good, but examples are better;
3. Draw from your own experience; and
4. Show you care.

Tailoring your teaching statement to the institution of interest is important because it can be your opportunity to stand out. I read a number of articles where professors, search committee chairs, and others, have written about this particular point. Many say that by tailoring your statement, you can show that you have done your homework – researched the type of institution in question, type of students you are likely to have in the class, class sizes, and other potentially relevant aspects of the position and the department.

Related to the previous point, being general about your teaching interests and statements can only get you so far. When describing what makes you a good teacher, give examples. If you don't have experiences to draw from, ask yourself who is your role model? More importantly, what characteristics does the teacher you want to be to your students have, and what type of learning environment you want to create for your students? Most likely, if you are going after a teaching position, it is likely that you already care about students' learning. Showing genuine care for your students' learning and progression in the classroom can be a part of your statement, too. Ask yourself: What are your objectives as a teacher, why is teaching important to you, and how do you want to make difference in the learning and lives of your students?

I hope this column gave you a few pointers and suggestions on how to craft your best (personal) research or teaching statement. Below are some of the articles and online tools I used in my own search. Best of luck in your job search!

Dubravka

Resources

Few general resources on CV, research, and teaching statements:
> http://serc.carleton.edu/NAGTWorkshops/careerprep/jobsearch/application.html
> http://www.vpul.upenn.edu/careerservices/gradstud/samples/
> http://www.celt.iastate.edu/teaching/philosophy.html
> http://www.crlt.umich.edu/gsis/onedayPFF2005/TeachingPhilosophyRubric.pdf
> http://advertising.utexas.edu/graduate/resources/PROD75_017333.html
> Goodyear, G. E., & Allchin, D. (1998). Statements of teaching philosophy. In M. Kaplan (Ed.), *To The Academy*, Vol. 17 (pp. 103-122). Stillwater, OK:
> Peter Fiske, MIT - "*The Truth about Teaching and Research Statements*."

I also found that some sites have a wealth of articles on the topic (search using desired key words). The two I found very useful include:
> http://sciencecareers.sciencemag.org/
> http://chronicle.com/section/Home/5

SPOTLIGHT ON THE PEOPLE WHO MAKE OUR ORGANIZATION GREAT – RICH SHAVELSON, STANFORD UNIVERSITY

*Donna Sundre, James Madison University*

For this issue, we are fortunate to receive some insights and reflections from Dr. Rich Shavelson. Below are his responses to our questions. Many thanks to his responsiveness and time.

Rich: I'm honored, and more than somewhat surprised to be asked to reflect on my career and the advice I might have for those beginning their careers. I want to thank Donna Sundre for her kind invitation and delicate prodding; otherwise you wouldn't be reading this. Donna asked me to address seven questions (a lucky number?) and so I will, briefly.

1.   How did you get into the field?

Careers are a funny thing. I was led to believe that early in one's life (teenager or before?) a career was chosen and an educational and experiential pathway was charted to pursue it. Truth be told, in my experience a career is something like a random walk; opportunity knocks and if we're lucky, we capitalize on it.

I would put the beginning of my career at the University of Oregon where, as an undergraduate, I was surprised not to have flunked out in my first quarter—and it only got better (so much better I stayed at one university or another for 40 years!). I had majored in pre-law, a major with few constraints. I wandered into a course on psychological testing offered by Lewis Goldberg of Big 5 Personality fame. Goldberg was bigger than life and a particular reading he'd assigned had caught my interest: Banesh Hoffman's *The Tyranny of Testing*. The physicist and educator pondered the answer to a standardized test item, "Which is the odd one out among cricket, football, billiards, and hockey?" ultimately raising the question, which the book addresses, "what sense is there in giving tests in which the candidate just picks answers, and is not allowed to give reasons for his choices?" After winning an NSF scholarship to study psychology, I quickly changed my major from law to psychology and
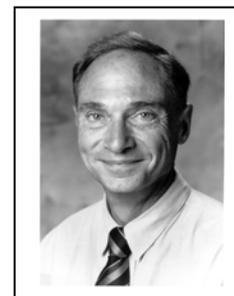
began work on the Goodenough Draw-a-Man Intelligence Test, looking at cross-national comparisons. All this was purely chance!

I left Oregon and during a brief stint in the movie industry, my father told me I was a bum and to go back to school. So I did—law school. That didn't last long and I found myself in a master's program in engineering psychology at San Jose State College. As chance would have it, the instructor who regularly taught industrial psychology was on sabbatical leave and Stu Parsons, a human factors engineer at Lockheed Missiles & Space Company, taught the class. A major requirement was to do a review of literature or empirical study; he asked for volunteers to work with him on one such study. After hearing the topic, I was the only volunteer left; Stu was stuck with me. The study, in anticipation of long duration space flight to Mars, asked whether people could distinguish water reclaimed from urine (closing the water loop, so to speak, because water weighs a lot to take into space) from tap water and distilled water. The findings were published in Aerospace Medicine. And I found myself in a job at Lockheed carrying out research on astronaut performance in lunar and zero gravity environments. This began my (now long) career that has focused on the measurement of human performance in cognitive, affective and behavioral domains. But, of course, the path was not straight. While at Lockheed, I received a scholarship to pursue a PhD in engineering at Cal. I had almost enrolled but by happenstance once again, I was led toward a measurement career. It turns out that in 1968, the manned space program, having put man on the moon, was winding down. Lockheed had opened up an education division and they needed someone who knew behavioral statistics to design an NSF funded evaluation of science education in the Palo Alto school system. I became fascinated and have maintained an interest and involvement ever since (my dissertation compared the correspondence between content structure of Newtonian mechanics with cognitive structure as students learned the physics). This led me to study with Lee Cronbach and Dick Snow and with their support to combine cognitive psychology, psychometrics, statistics, and measurement in what evolved as a career.

From measurement of astronaut performance to representations of cognitive and content structure, to the measurement of self-concept structure, to models of teachers' decision making, to the measurement of enlistees military-job performance, to performance assessments in science and mathematics, to studies of learning progressions and formative assessment in science to my current work on the Collegiate Learning Assessment, I now can see, post hoc, a pattern in the random walk.

My new adventure is trying to figure out how to do retirement; I retired from Stanford in January 2010. My daughter and I have started a small consulting company, SK Partners, LLC, and are blessed with too many interesting studies associated with learning and assessment in education, work, and medicine.

2.   If you weren't doing this, what would you do?

In the final analysis, I have had an extraordinarily rewarding career, as an academic, a university administrator (I tried the deanships twice), as well as administrator/researcher in the private sector (RAND Corporation). If I had it to do over again, I'd do it the same way and hope the random walk was equally successful. But if I had randomly walked into science or engineering, instead of psychology and education, who knows!

3.   What advice would you have for graduate students who want to get into this field?

When I finished my doctorate at Stanford, I was asked to stay on for three years as an acting assistant professor, filling in for my advisor, Lee Cronbach, who was on sabbatical. Me? Fill in for Lee? Well, you can see the humor in this. When Lee returned from sabbatical, he got wind that I was consulting for an outfit that taught aspiring lawyers how to score high on the Law School Admissions Test. He didn't think that was appropriate; if I consulted at all, I should do so where I would learn something new. I replied that that was well and good but I had a wife and baby at home and was making $7,000 a year teaching at Stanford (!), and somehow that didn't cover expenses. This caught him up short. He mused for a few minutes and said that when he was in my shoes, he solved the problem—why didn't I write a successful textbook like his Essentials of Psychological Testing? I rolled on the floor and once I had composed myself I assured him I would if I could but that was highly unlikely!

So, I'm wary on giving advice as to how to get into the field. In the end, you have to follow your passion and, at least for me, passion interacted with what I turned out to be competent in doing. Once found, you have to work very hard at it; it's not an avocation. Anders Ericsson's deliberative practice comes to mind—it's not sufficient to practice your profession. You must continually push the bar upward. You're never done learning and trying and failing and succeeding and pushing the bar upward.

4.   When not teaching and researching, what do you do or like doing?

This is easy. I go to Hawaii and swim, scuba dive, sit in the shade with the trade winds blowing reading a book and sipping a mai tai, jogging, working out in the gym, chatting with friends. Actually I do that outside of Hawaii as well. I'm blessed with wonderful friends in the U.S. and elsewhere. After a research institute board meeting in Fribourg, Switzerland next month,

Fritz Oser, Juergen Baumert and I are heading to the Piedmont region of Italy to hike and try to reach consensus on which Barolo we like most—a daunting task—a performance assessment task!

5.   What would you say has been one of the biggest innovations in psychometrics in the last decade or two?

I'm beginning to run out of steam. Of course if you ask this question I'm not an unbiased observer. In terms of widespread publication and application, of course item response theory tops the list. It has proved to be an enormously important scaling tool for behavioral measurement theory and practice; there is one breakthrough after another reported in the *Journal of Educational Measurement* and elsewhere. But I am partial to measurement theories and of course am a contributor to generalizability theory so I see that as a big innovation. Finally, I believe the work of George Marcoulides and others to integrate IRT and G-theory is very important.

6.   When you go to conferences, how do you pick what sessions to attend?

Well, it all depends. Am I at the beginning of my career, middle, end? It matters. At the beginning, I went to sessions where I could catch up on the most promising innovations in my field. In the middle I did a lot of networking and meeting outside of sessions. And at the end, now, I follow Dick Snow's advice to only attend sessions for which you don't know anything and might learn something new, or go to sessions on a particular topic you are just getting involved in.

7.   Who has been a significant influence in your professional life?

Of course many people have influenced my career as I randomly proceeded along. First to mind, of course, are Lee Cronbach and Dick Snow. Dick Atkinson and Gordon Bower were highly influential while I was getting my doctorate at Stanford as well. And the support of Stu Parsons and Joe Seminara at Lockheed sparked my career and has stayed with me all these years. And Leigh Burstein, while he was alive, took it upon himself to prevent me from making errors (especially mathematical/statistical) along the way. But I/we lost Leigh too early too many years ago. I hope he would have approved of what I've accomplished.

ANNOUNCEMENTS: NCME

NCME needs your help to celebrate its 75th Birthday in 2013

NCME will be 75 yrs old in 2013 and we would like to begin planning for the event in the next year. We need your help. First, we are looking for any photographs of past NCME Annual Meetings, past presidents, and other historical events in educational measurement that can be used as part of a convention display. If you have photos or other documents (historical books, articles, etc.) that you believe would add to this display we are hoping you could make high resolution color copies and share them with NCME. If you have any such materials and are willing to share them with NCME please forward them to our executive officer Plumer Lovelace at plovelace@ncme.org.

Second, we are hoping to appoint a small working group that would be responsible for planning a celebration at our 2013 meeting. We would like to develop a display that will illustrate our timeline and significant events (e.g., first issue of the Testing Standards, elected officers, first issue of our journals), plan a celebration, and even consider programming and other activities that would celebrate our professional organization. If you are interested in serving on a 75th anniversary planning group or have other ideas please contact Wayne Camara wcamara@collegeboard.org.

The Council was originally established in 1938 as the National Association of Teachers of Educational Measurements. In 1942, the name of the Association was changed to National Council on Measurements Used in Education, and its name was changed again in 1961 to National Council on Measurement in Education.

CALL FOR NOMINATIONS

NCME – Please go to the following link for details: http://www.ncme.org/about/awards.cfm

Call for the 2011 Bradley Hanson Award for Contributions to Educational Measurement – Due by November 13, 2010

The Bradley Hanson Award has been established to honor Bradley Hanson's contributions to the field of educational measurement and to further advance the goals embodied in his work. Applicants must propose a research project that promises to make a substantive contribution to the field of educational measurement and / or the development, instruction, or mentoring of new professionals in the field. A typical time frame for the expected completion of the proposed project is one to two years. The recipient will be awarded $1,250 and a commemorative plaque from NCME, which will be presented to the recipient at the 2011 NCME Annual Meeting in New Orleans. For additional information on the award, and past recipients and projects, please go to Bradley Hanson's homepage (http://www.b-a-h.com/).

Eligibility: To be eligible for the award a candidate must (1) be a member of NCME or be nominated by an NCME member and become a member by the time the award is presented at the 2011 NCME Annual Meeting; and (2) be working on a project that promises to make a significant contribution to the field of educational measurement and/or a significant contribution to the development of new professionals in the field. Individuals or groups of individuals at any stage in their careers are eligible.

Call for the 2011 Jason Millman Promising Measurement Scholar Award – Due by November 13, 2010

In 1995, the Department of Education at Cornell University initiated the Jason Millman Promising Scholar Program to honor the lifetime work of Dr. Jason Millman, to recognize his contributions to the field of applied measurement, and to continue Dr. Millman's support of scholars in their formative years who are just beginning their research careers.

Since 2003, the National Council on Measurement in Education with the support of the Millman endowment has continued the tradition of this award. As in the past, it is designed to honor Dr. Millman's work by recognizing a scholar at the early stages of his/her career whose research has the potential to make a major contribution to the applied measurement field. In addition to recognition by NCME, the successful candidate will receive $1,000. Only one candidate will be chosen to receive the award each year and will be presented the award at the annual meeting.

Eligibility: To be eligible for the 2011 Jason Millman Award an applicant must have received the Ph.D. after April 1, 2006. If confirmation is required, the review committee will use the date printed on the nominee's diploma. The nominee must also have two or more unique papers either accepted for presentation at an NCME annual meeting or published in NCME publications within the last five years; and have the support of his/her professional colleagues indicating that his/her work represents a significant contribution to the field of applied measurement.

Call for the 2011 Brenda H. Loyd Outstanding Dissertation Award – Due by November 13, 2010

The Brenda H. Loyd Award honors an outstanding dissertation in the field of educational measurement. The winner of the award will receive $1,000 and a commemorative plaque from NCME. In addition, the advisor or committee chair for the award-winning dissertation will receive a letter of congratulations.

Eligibility: Nominations will be accepted for dissertations completed between July 1, 2008, and June 30, 2010. The author of the dissertation need not be a member of NCME. However, the author's advisor must be a member of NCME.

Call for the 2011 Alicia Cascallar Award for Outstanding Paper by an Early Career Scholar – Due by November 1, 2010

The Alicia Cascallar Award for an Outstanding Paper by an Early Career Scholar has been established to honor Alicia's professional commitment and accomplishments and to continue her practice of mentoring and encouraging promising new scholars in the area of educational measurement. The award will be given to an early career scholar(s) who presented an outstanding paper at the most recent Annual Meeting. A cash award of $1,000, a citation, and a waiver of NCME conference fees for the following year will be provided as partial support for an early career member(s) of NCME to travel to the annual meeting. The award will be presented at the NCME Annual Meeting in 2011.

Eligibility: To have presented a paper at the most recent (2010) NCME meeting in a paper session or as part of a symposium or panel discussion. The author(s) must be an early career member of NCME (received their doctoral degree within 5 years of the annual meeting).

Call for the 2011 NCME Award for Career Contributions to Educational Measurement – Due by November 30, 2010

The award honors living persons whose publications, presentations, and professional activities over a career have had a widespread positive impact on the field of educational measurement. These contributions may include theoretical or technical developments, service to professional organizations, conceptualizations of educational measurement that have enhanced public understanding of measurement problems, applications of theory that have influenced the nature of educational tests and measurement, or innovative ideas that have significantly affected measurement practices. Award recipients receive a check for $1,000 and a commemorative plaque from NCME. In addition, recipients are invited to present an address at the next year's NCME Annual Meeting.

Eligibility: Nominations should be made by an NCME member.

Call for the NCME 2011 Award for an Outstanding Example of an Application of Educational Measurement Technology to a Specific Problem – Due by December 4, 2010

NCME is seeking nominations for an award that will be given in 2011 for an outstanding example of an application of educational measurement technology applied to a specific practical problem in educational measurement. Work on the application should have been completed in 2008, 2009, or 2010. Relevant applications include but are not limited to the use of technology to (1) assess, select, or classify students, (2) measure complex traits, (3) evaluate an educational program or product, (4) integrate testing and learning, or (5) solve other important practical problems in educational measurement. Selection criteria include the quality and innovation of the application and the significance of its impact on the practice of educational measurement.

Self-nominations are encouraged as are nominations of others. Applications completed by individuals or by groups are eligible for this award. Nominees need not be NCME members. A nomination consists of a 3 to 5 page statement summarizing the nature of the application. Nomination statements should clearly describe the application and explain how it is used to address a specific measurement problem. Additional supporting documentation pertinent to the contribution (e.g., relevant books, articles, software, or workshops) is recommended. Nominations should also include the names and addresses of two people who are familiar with the application. The awards committee may request further materials and may contact others who are likely to be able to evaluate the application. The award will be presented at NCME's annual meeting to be held in New Orleans in April, 2011.

AERA, Division D

Call for Nominations for the 2011 Award for Significant Contribution to Educational Measurement and Research Methodology – Due by November 30, 2010

Division D of AERA welcomes nominations for the 2011 Award for Significant Contribution to Educational Measurement and Research Methodology. This annual award recognizes published research judged to represent a significant advancement in theory and practice of educational measurement and/or educational research methodology. This award is not considered a lifetime achievement award; the significance of the contribution will be the primary consideration for this award. The research may be the work of an individual or a team of researchers. The winner will be announced and honored at the 2011 AERA annual meeting with a plaque and a $1,000 award.

GUIDELINES

In selecting a winner, the following guidelines will apply:
•   Quality and potential impact of the research on educational measurement and research methodology are the primary criteria for this award.
•   The recognized publication may be, but is not limited to, a refereed research article in either a print or online journal, a paper published in a refereed conference proceeding, monograph, book chapter, and/or book. The work must have been published between August 1, 2008 and July 31, 2010.
•   The nominee(s) must be the first or sole author(s) of the work and must be a member of Division D of AERA.
•   The nomination should be submitted electronically unless the material is not available in that format.

APPLICATION PROCEDURE

A complete nomination consists of:

- The nomination letter (self nominations are welcome);
- A copy of the nominated research publication including its bibliographic citation. If the publication is a book or monograph, the nominator should indicate which portion of the book or monograph is nominated for this award;
- At least one additional letter of recommendation (from person[s] other than the nominator) addressing the quality and potential impact of the research; and
- The nominee's vita.

The nominator agrees that this work will not be nominated for a similar award that will be given during the 2011 Annual Meeting of either AERA or NCME.

Submit the complete nomination by **November 30, 2010** to

Hong Jiao
Chair, AREA-Division D Significant Contribution to Educational Measurement and Research
Methodology Award Committee
Department of Measurement, Statistics and Evaluation
1230B Benjamin Building
University of Maryland
College Park, MD 20742
hjiao@umd.edu

OTHER ANNOUNCEMENTS

CALL FOR PAPERS
Applications of Operations Research in Educational Measurement
Special Volume of the Annals of Operations Research

This special volume of the journal Annals of Operations Research published by Springer will concentrate on the use of operations research within the educational measurement industry. This volume is directed at both academicians and practitioners. Topics of interest include – but are not limited to – the following:
- Static, dynamic, and robust test assembly
- Parameter estimation for large-scale educational models
- Analysis of the test results
- Methods to recognize aberrant behavior (person fit and item fit)
- Simulation of educational measurement systems
- Stochastic processing of items and test takers
- Analysis of item pools
- Item difficulty modeling
- Item generation

Submissions procedure
Please find complete submission instructions at http://www.editorialmanager.com/anor/ . When requested to select an article type, please select "SI: Educational Measurement".
Each paper will be peer reviewed.

Special issue editors
• Professor Ronald D. Armstrong, Rutgers University, r.d.armstrong@att.net
• Dr. Dmitry I. Belov, Law School Admission Council, dbelov@lsac.org

Important dates
Submission deadline: February 1, 2011
Final version due: April 1, 2012
Publication: Papers will be published online very soon after acceptance

OTHER CONFERENCES OF INTEREST

Eastern Educational Research Association
President: Abbot L. Packard, University of West Georgia
Annual Conference: February 23-26 2011
Location: Hyatt Regency Sarasota, Sarasota, Florida
Web page: www.eeralonline.org

Mid-Western Educational Research Association
President: Doug Feldmann, Northern Kentucky University
Annual Conference: October 13-16, 2010
Location: Westin Great Southern Hotel, Columbus, OH
Web page: www.mwera.org

Mid-South Educational Research Association
President: Linda Kondrick, Arkansas Tech University
Annual Conference: November 3-5, 2010
Location: Renaissance Mobile Riverview Plaza, Mobile, AL
Web page: www.msera.org

New England Educational Research Organization
President: Christa Winter, Springfield College
Annual Conference: April 27-29, 2011
Location: Fairfield Inn & Suites New Bedford, MA
Web page: www.neero.org

Northeastern Educational Research Association
President: Katharyn Nottis, Bucknell University
Annual Conference: October 20-22, 2010
Location: Marriott Rocky Hill, Rocky Hill, CT
Web page: www.nera-education.org

Northern Rocky Mountain Educational Research Association
President: Art Bangert, Montana State University Bozeman
Annual Conference: September 30 – October 1, 2010
Location: Big Sky Resort, Big Sky, MT
Web page: www.nrmera.org

Southwest Educational Research Association
President: Linda Reichwein Zientek, Sam Houston State University
Annual Conference: February 2-5, 2011
Location: The Menger Hotel, San Antonio, TX
Web page: www.sera-education.org