



**NCWIT Summit
on Women and IT**
practices and ideas
to revolutionize computing
May 16-18, 2016 | Red Rock Canyon, Nevada



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FlashTank Flashback

NCWIT Response to the 2015 Winning Presentation

Jane Krauss, NCWIT
Dr. Chris Wood, UNLV



Cite

- “... students want us to see them as whole human beings with complex lives and experiences rather than simply as seekers after compartmentalized bits of knowledge.”
-- bell hooks, teaching to transgress (1994)

Table Talk



Have you ever taken a career assessment?
What was your experience?

Today's Empower Hour

Introductions

1. 2015 FlashTank Flashback
2. NCWIT Avenues of Exploration
3. Overview of Career Development and Career Assessment Instruments
4. NCWIT & Community Actions
5. Discussion – What More?





Career Planning Tools – A Roadblock to Computing Careers?

Dr. Linda M. Ott
Michigan Technological University

NCWIT FLASH TANK

Linda Ott

“I’d like to see NCWIT do some research and perhaps work with the people who develop these tests to consider the broad range of careers that are currently available to computing graduates and to identify the skills necessary for them.”





Career Assessment Instruments

Idea 1: Bang on Career Assessment Instruments

Understand the nature of CAIs: What happens when people with a technical bent explore careers using a career assessment instrument?

A. Have tech men/women, happy/unhappy take MyPlan, examine results, report

B. Study multiple CAI's, create optimal response, compare

Idea 2: Examine O*NET

Examine worker attributes, job descriptions from O*Net, the primary info source used by CAIs.

Ask: What (if any) patterns of unconscious bias, masculine oriented language, and/or stereotype cues exist in descriptions of technical worker characteristics and technical occupations?

No issues, descriptions are accurate (if dry), but maybe insufficient?

Idea 3: Examine *interpretations* of O*Net by CAIs

Examine treatments of worker attributes, job descriptions elaborated on by CAIs.

Ask young people in our community :
*To what degree are these accurate?
complete? helpful?*

*Use the result to produce new
resources— “counterprogramming”*

One Treatment: Software Developer

Software developers combine their expertise in computer science, engineering, and math to design, develop, and test software for home, school, and business use.

Did You Know?

Software developers usually begin their careers testing ongoing designs, but with greater experience, they eventually design and develop software.

Are You Ready To...?

- Try several approaches to the same programming problems
- Spend many hours debugging programs
- Keep up with a constantly changing and growing technology by reading and taking classes
- Be patient and tactful, but also relentless in getting the job done
- Work as part of a team

Your Turn



Try several approaches to the same programming problems.

Apply creative problem solving to tackle programming challenges from a variety of angles.

Spend many hours debugging code.

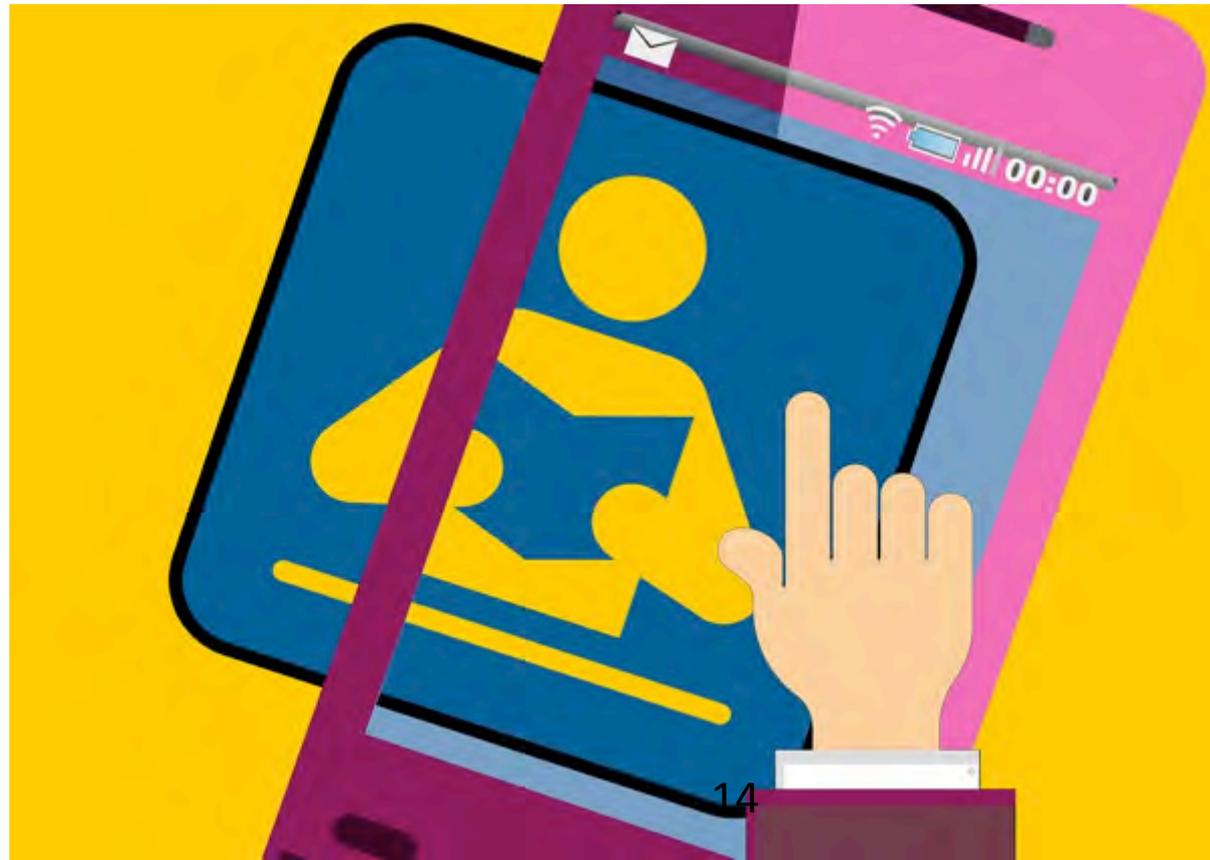
After a lot of hard work, enjoy a “eureka” moment when you isolate a bug.

Idea 4: Counterprogramming

Produce a highly-focused career interest assessment app for younger people

Where all
interests map
to CS

Couragion
STEM Career
Exploration





What is career development?

- The **“total constellation of psychological, sociological, educational, physical, economic, and chance factors that combine to shape the career of any given individual over the life span”** (Sears, 1982, p. 139).

Quiz – What year?

- “We guide our boys and girls to some extent through school, then drop them into this complex world to sink or swim as the case may be. Yet there is no part of life where the need for guidance is more emphatic than in the transition from school to work, -- the choice of a vocation, adequate preparation for it, and the attainment of efficiency and success.”
- “...employment expense, waste of training, and low grade service, are largely due to the haphazard way in which young men and young women drift into employments, with little or no regard to adaptability, and without adequate preparation, or any definite aim or well considered plan to insure success.”

Origins & Influences

- Parsons, 1909
- WWI
- Psychometric/Testing Movement
- WWII
- Federal Legislation
- Internet



Uses of Career Assessment Instruments (Herr, Cramer, & Niles, 2004)

- Prediction
- Discrimination
- Monitoring
- Evaluation



Career Assessment Instruments: Discernment

- Interests
- Values
- Aptitude

≥ Self-Awareness

↑ Career Decision-making



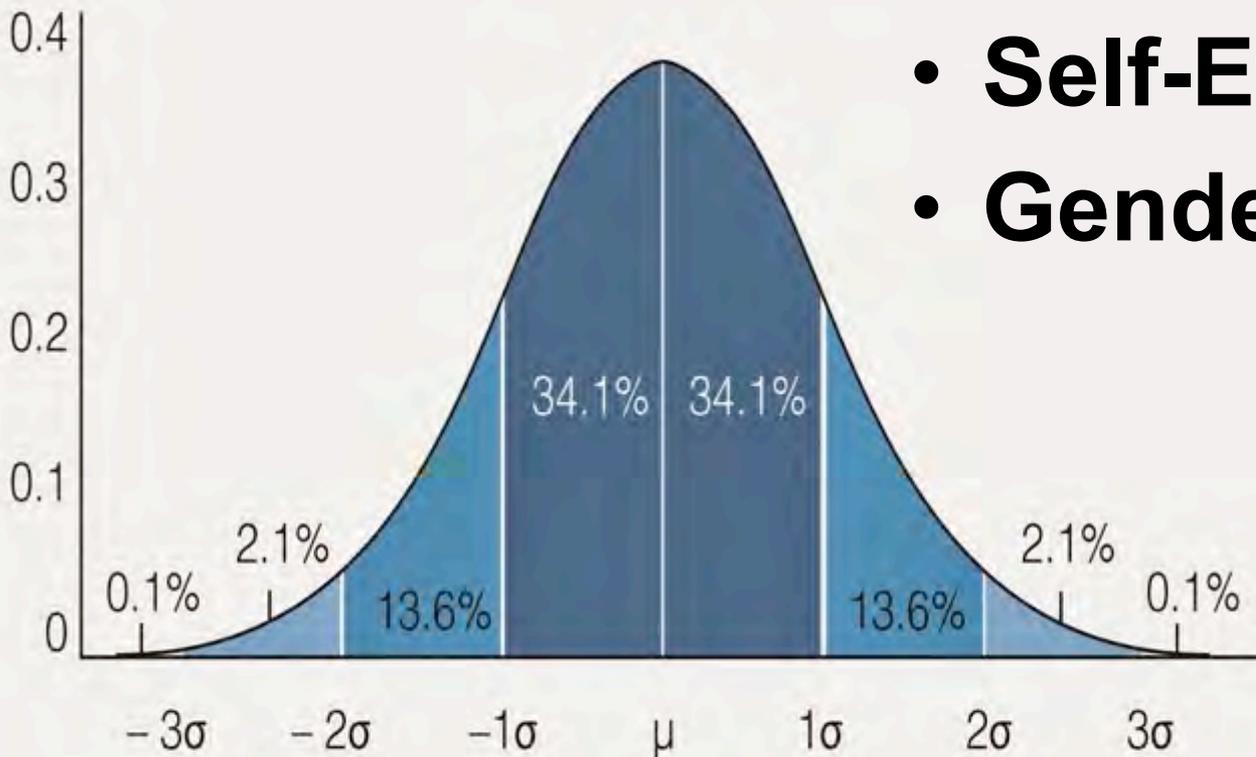
Challenges

- Career Neologism
- Changing Nature of “Work”
- Culture, Language, Racial/
Ethnic Bias
- Stereotyping Socialization, &
Social Justice



Gender and Career Assessment Instruments

- **Bias**
- **Role Salience**
- **Self-Efficacy**
- **Gender Norming**



Desideratum

- Needed research
- Improved CAI consumers/advocates
- Optimizing CAI interpretation for women & IT
- NCWIT Members & Affiliates - *sound and trustworthy information, tools, and experiences*

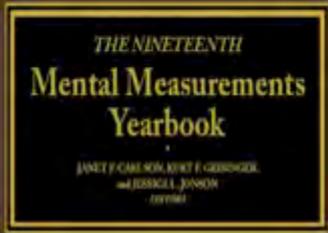


Reviews of career assessment instruments?

- *Mental Measurements Yearbook* - 19th edition (2014)

<http://www.unl.edu/buros/>

- *A Counselor's Guide to Career Assessment Instruments* - 6th edition (2013) www.ncda.org



A COUNSELOR'S GUIDE TO
CAREER ASSESSMENT
INSTRUMENTS

SIXTH EDITION

CHRIS WOOD | DANICA G. HAYS



-Where We Landed-



FlashTank 2015

-Where We Landed-



Seeking a seat at the “expert” table, providing input on policy and practice at the federal level.

Continuation of earlier actions with BLS

FlashTank 2015

-Where We Landed-

Improve the ecosystem



Continue providing sound and trustworthy experiences, programs, resources and messages that support participation in computing.

FlashTank 2015

-Where We Landed-

- Inform: Flashback, White Paper
- Catalyst for excellent thinking
- Antennae up, stand ready for action
- Continue to gauge interests of the Community

FlashTank 2015

-Where We Landed-

Inform & work
with the
Community



- White Paper
- FlashTank Flashback

<p>ISTJ Cataloguer (public library)</p> <p>Deciding exact subject heading and classification of new works</p> <p>Orderliness of the position</p> <p>Working uninterruptedly in a quiet space</p>	<p>ISFJ Assistant Public Services Manager (public library)</p> <p>Planning and organizing events with the unofficial title of "project queen"</p> <p>Coordinating staffing needs and organizing training programs to meet those needs</p> <p>Putting out a calendar of events</p> <p>"Bringing both heart and detailed organization" to her work</p>	<p>INFJ Reference Librarian (small public library)</p> <p>Coming up with creative <i>Wirf\$</i> to meet customers' needs: "I can think of 50 <i>Wirf\$</i> to approach their need. I'll make what I have here relate to their topic and show them how it does."</p> <p>Seeing the patrons happy</p> <p>Quiet activities such as paper-work tracking library statistics</p>	<p>INTJ Collections and Acquisitions Head (university library)</p> <p>Developing and working with policies and procedures and identifying the need for new ones</p> <p>Reviewing curriculum changes and their impact on the library</p> <p>Monitoring the budget and moving monies around to meet needs through paying attention to the big picture</p>
<p>ISTP Automation Specialist (public school system)</p> <p>Keeping up with the latest equipment and computer applications</p> <p>Using technology in his work</p> <p>Teaching short courses on computer applications</p>	<p>ISFP Archivist (state library)</p> <p>Surrounding herself with rare books and special documents</p> <p>Finding just what the patrons need to make them happy</p> <p>Camaraderie with other staff</p>	<p>INFP Small Branch Library Manager (public library)</p> <p>Forming personal relationships with customers and enjoying their idiosyncrasies</p> <p>Being part of the community and touching people's lives</p> <p>Building collaborations: "I see my library as not having any walls, both literally and figuratively"</p>	<p>INTP Acquisitions Specialist (university library)</p> <p>Analyzing what is needed in the library collection</p> <p>Building high-quality collection through critiquing materials</p> <p>Constantly searching for new knowledge</p> <p>Having a quiet space in which to concentrate deeply</p>
<p>ESTP Technology Specialist (extension division of university)</p> <p>Trying out and then adapting technologies to the library's needs (as a "techno guinea pig")</p> <p>Preparing and updating Web pages</p> <p>Teaching others how to use the technologies she has learned</p> <p>Being away from her desk</p>	<p>ESFP Law Librarian (law firm)</p> <p>His colleagues and the friendships and teamwork they've developed</p> <p>Variety of requests he gets; "no two days are alike" and even the "law changes weekly"</p> <p>Satisfaction of helping those lawyers find the information they need, although "at times no answer exists and it's hard to figure out when to stop!"</p>	<p>ENFP Children's Librarian (public library)</p> <p>Having a variety of duties and loving them all</p> <p>Having freedom to move from area to area and learning something from each</p> <p>Being creative, such as developing storytime kits for daycare providers</p>	<p>ENTP Inter-Library Loan Department Head (public library)</p> <p>Fielding whatever comes to her and seeing what people are wondering about</p> <p>Determining what piece of the "library puzzle" fits a patron's needs</p> <p>Having a variety of activities</p> <p>Staying on the cutting edge to better help customers</p>
<p>ESTJ Library Services Coordinator (state institution libraries)</p> <p>Planning how to provide services, thinking through various approaches and the consequences of decisions</p> <p>Taking responsibility and efficiently following through</p> <p>Keeping her technical skills and knowledge up-to-date so she can check the facts quickly</p>	<p>ESFJ Distance Learning Librarian (university library)</p> <p>Traveling on-site to teach others basic library skills including searching special indexes, evaluating information they find, and showing them how to order materials on their own</p> <p>Helping students find needed resources, using a personal touch</p>	<p>ENFJ Large Branch Library Manager (public library)</p> <p>Playing a variety of roles such as "hostess, mother, social worker, promoter . . ."</p> <p>Encouraging the process of intellectual development in her patrons</p> <p>Contributing to her staff's own personal and professional development including letting them make mistakes</p>	<p>ENTJ Library Director (college library)</p> <p>The information and systems aspects of his job: "Library work can be conceptualized as a flow, which can be done poorly or well, efficiently or inefficiently. It's a series of events to be organized."</p> <p>Making decisions, especially about his own work</p> <p>Staying on task; he's most bothered by personnel issues</p>

This table and accompanying text are based solely on interviews with librarians who happen to have these specialties. Special thanks to Karen Kolb, St. Paul (Minnesota) Public Library; M.J. Sheffer, Edgewood College, Madison, Wisconsin; and Donna Breyfogle, University of Manitoba Library, Winnipeg, Canada, for help locating librarians of diverse types. And thanks to all the librarians who responded with information and anecdotes.

Table Talk 2

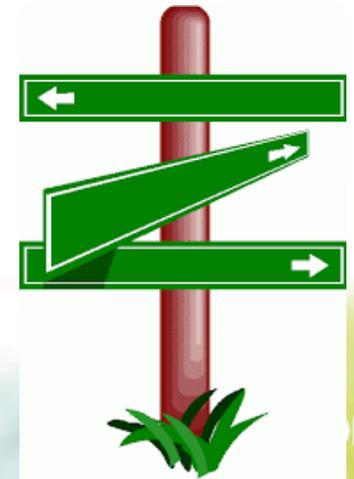
What next?

- » What else is worth exploring regarding this topic?
- » What might NCWIT and the NCWIT community do with respect to students experiences and career development?

Roadblock or “Road Sign?”

Career Assessment Instruments

- **Contextualize Results**
- **Obtain Guided Interpretation from Qualified Professional**
- **Explore Gender Related Internal and External Barriers**
- **Expand Realm of Possibilities and Crystallize Interests in Vocational Action**



“A vocation is that place where a person’s deep gladness meets the world’s great need”
- Frederick Buechner



Thank You!



