The National Academies of
SCIENCES • ENGINEERING • MEDICINE

DIVISION OF BEHAVIORAL AND SOCIAL SCIENCES AND EDUCATION

HOW PEOPLE LEARN II: THE SCIENCE AND PRACTICE OF LEARNING

Board on Behavioral, Cognitive, and Sensory Sciences
Board on Science Education

OPEN SESSION AGENDA
Committee Meeting #3
October 29-30, 2015

Keck Center
Room 101
500 Fifth Street NW
Washington, DC

Day One: Thursday, October 29

Room 101: Open Session (Open to the Public)

1:15 p.m. **WELCOME & OVERVIEW OF OPEN SESSION**

- Sujeeta Bhatt, Study Director, Science and Practice of Learning
  - Open session rules
- Cora Marrett, Chair, Committee on the Science and Practice of Learning

1:30 p.m. **INVITED PRESENTATIONS: PANEL ON LEARNING IN ADULTHOOD AND THE USE OF TECHNOLOGY FOR LEARNING IN ADULTHOOD**

- Ursula Staudinger, *Columbia University (20 min)*
  1. What and how do age-related changes in cognitive competencies and processes during mid and late life affect learning outcomes? What is the profile of temporal changes across key competencies and processes?
  2. How does learning and it's outcomes in mid-life and later adulthood differ from learning during childhood and adolescence?
  3. What is the evidence, the implications and the limitations associated with plasticity in learning during mid-and late adulthood?
  4. What are promising directions for improving the assessment of learning potential and competencies in later adulthood?

- Phil Ackerman, *Georgia Institute of Technology (20 min)*
  1. What and how do age-related changes in cognitive competencies and processes during mid and late life affect learning outcomes? What is the profile of temporal changes across key competencies and processes?
  2. How does learning and it's outcomes in mid-life and later adulthood differ from learning during childhood and adolescence?
  3. What is the evidence of how personality, interests, work experiences and career history affect learning and its outcomes in mid- and late adulthood?
  4. What are promising directions for improving the assessment of learning potential and competencies in later adulthood?

- Walter Boot, *Florida State University (20 min)*

1. What technologies are available to mitigate age-related changes in cognitive competencies and processes during mid and late life?
2. What empirical data are available to assess the effectiveness of the technologies in helping older populations to learn and adjust to changes in cognitive competencies?
3. What are the most pressing two or three controversies in the research relating to the use of technologies for learning in older populations (including use of technology in an older workforce population)?

2:30 p.m. **PANEL DISCUSSION AND COMMITTEE DISCUSSION WITH PRESENTERS**

- Cora Marrett, Chair
  - Panel discussion: Controversies regarding the science and implications for transitioning the science to practice for learning in adulthood
  - Questions and discussions stimulated by presentations

3:15 p.m. **AUDIENCE QUESTIONS & ANSWERS WITH PRESENTERS**

3:30 p.m. BREAK – END OPEN SESSION

Meetings and activities of BBCSS are sponsored by:

Alfred P. Sloan Foundation; American Educational Research Association; American Psychological Association; Bill & Melinda Gates Foundation; Elsevier; National Aeronautics and Space Administration; National Cancer Institute; National Institute on Aging; National Science Foundation; U.S. Army Research Institute for the Behavioral Sciences; U.S. Department of Health and Human Services; Office of the Assistant Secretary for Planning and Evaluation (ASPE); Substance Abuse and Mental Health Services Administration (SAMHSA); Teagle Foundation; William and Flora Hewlett Foundation; Institute of Education Sciences, U.S. Department of Education; National Academy of Sciences' Kellogg Fund and President's Circle Fund

Day Two: Friday, October 30

Room 101: Open Session (Open to the Public)

9:30 a.m. **WELCOME & OVERVIEW OF OPEN SESSION**

- Cora Marrett, Chair, Committee on the Science and Practice of Learning
- Sujeeta Bhatt, Study Director, Science and Practice of Learning
  - Open session rules

9:45 a.m. **INVITED PRESENTATIONS: LEARNING DISABILITIES, UNIVERSAL DESIGN FOR LEARNING, AND ASSISTIVE TECHNOLOGY**

- Jack Fletcher, *University of Houston*: Overview of Learning Disabilities (20 min)
  1. How are learning disorders/disabilities defined? (Including the distinction between disorders and disabilities)
  2. What are the main findings from the last decade in the areas of cognitive science and neuroscience that have implications for practitioners working with individuals with learning disorders?
  3. How are learning disorders/disabilities assessed (neuropsychological testing vs. neuroimaging disabilities)?
  4. What are the most pressing two or three controversies in the research (cognitive science) relating to learning disorders/disabilities?

- David Rose, *CAST*: Overview of Universal Design and Use of Assistive Technologies (20 min)
  1. Overview of Universal Design (UD)
  2. Is there a taxonomy or set of categories of individuals with special needs that our group can use? We acknowledge that everyone is very unique, but is there some guidance on which categories are most frequent?
  3. What technologies are used to help individuals in particular special-needs categories? Is their data on the effectiveness of these technologies in helping individuals learn and adult to life?
  4. Future of UD in terms of implementation, etc. (To what extent is there adequate professional development for universal design? To what extent are universal design principles incorporated in today's learning technologies?)
  5. Controversies in the research and practice of using UD for learning disabled students

- Donald Compton, *Florida State University*: Reactions from the Field of Learning Disabilities (20 min)
  1. What is the role of context in the manifestation of learning disorders? Learning disabilities are often not observed/diagnosed until a child enters school, so the impacts of any possible brain development differences are seemingly minimal until entering school – what impact does the school context have on the diagnosis, assessment, etc. of learning disabilities?
  2. What are the implications of the above, along with the first two presentations in the session, for the training of practitioners who work with individuals with learning disabilities?

10:45 a.m. **COMMITTEE DISCUSSION WITH PRESENTERS**

- Cora Marrett, Chair
  - Questions and discussions stimulated by presentation

11:15 a.m. **AUDIENCE QUESTIONS & ANSWERS WITH PRESENTERS**

11:30 a.m. BREAK – END OPEN SESSION

Meetings and activities of BBCSS are sponsored by:

Alfred P. Sloan Foundation; American Educational Research Association; American Psychological Association; Bill & Melinda Gates Foundation; Elsevier; National Aeronautics and Space Administration; National Cancer Institute; National Institute on Aging; National Science Foundation; U.S. Army Research Institute for the Behavioral Sciences; U.S. Department of Health and Human Services; Office of the Assistant Secretary for Planning and Evaluation (ASPE); Substance Abuse and Mental Health Services Administration (SAMHSA); Teagle Foundation; William and Flora Hewlett Foundation; Institute of Education Sciences, U.S. Department of Education; National Academy of Sciences' Kellogg Fund and President's Circle Fund