



# Adult Learning and Development

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for Teacher Leaders  
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# Relevance

- In many models of teacher leadership (and related standards), the term “adult learning” is used
- Example: “The teacher leader is able to apply strategies of adult learning across teacher leadership activities”
- Assumption: Adult learning refers both to the teacher leader (self) and those she or he interacts with (e.g., other teachers, parents, administrators)

# Overview

- Adult Learning: The Foundational Theory
- New Perspectives I: Transformational Learning
- New Perspectives II: Self-Directed Learning
- The Missing Ingredient: Adult Development
  - Cognitive Ability
  - Personality
- Wrap-Up

# Adult Learning: The Foundational Theory

# Adult vs. Child Learning

- Knowles (1968) introduced the concept of “andragogy” or “the art and science of helping adults learn”
- In contrast to “pedagogy” or “the art and science of helping children learn”
- Based on five assumptions

# Assumption 1

1. The adult learner has as an independent self-concept and can direct his or her own learning
  - Corollary: Teacher leaders should move the adult learner from being dependent to being self-directed
  - Assumes self-concept is malleable (which -- as I shall show -- it is)

# Assumption 2

2. The adult learner has accumulated a reservoir of life experiences that are a rich resource for learning
  - Corollary: Learning material should be tied to these experiences
  - But there appears two major forms of adult development (fluid intelligence; tied to incidental learning, and crystallized intelligence, tied to formal learning and acculturation)

# Assumption 3

3. An adult learner has learning needs closely related to changing social roles
  - The adult learner might need to learn something because of a new job or social role (e.g., entering the profession, struggling to teach particular concepts, crossing-over to a new domain)
  - Career change and the “millennial”



# Assumption 4

4. The adult learner is problem-centered and interested in immediate application of knowledge

- Corollary: The adult learner is more concerned with how he/she will use the knowledge. How will this new knowledge influence my teaching? (Metacognition)
- But knowledge is a function of time and effort (e.g., development of expertise)



“ Even for the most talented individuals, ten years of experience in a domain (ten-year rule) is necessary to become an expert”(Ericsson, 2006, p. 691)

# Assumption 5

5. The adult learner is motivated to learn by internal rather than external factors
  - Corollary: Adults learn because they want to learn (intrinsic motivation).
  - In the case of teachers, perhaps because they want to learn new content or skills, or develop into a teacher leader.

# Come the “Theory”: Come the Critiques

- It’s not really a theory at all (Hartree, 1984). It does not explain how people learn
  - Theory - an explanation of a set of related observations or events based upon proven hypotheses and verified multiple times by detached groups of researchers.
- Do these principles really only apply to adult learners?
  1. Has an independent self-concept and can direct his or her own learning
  2. Has accumulated a reservoir of life experiences that are a rich resource for learning etc

# Empirical Evidence

- Rachal (2002) reviewed 19 experimental & quasi-experimental Studies of andragogy between 1984-2001 & found mixed results.
- He stated that the andragogy is difficult to study because it is not very well defined
- And that, because of this, the “art” of andragogy might take precedence over the “science



# **New Perspectives I: Transformative Learning**

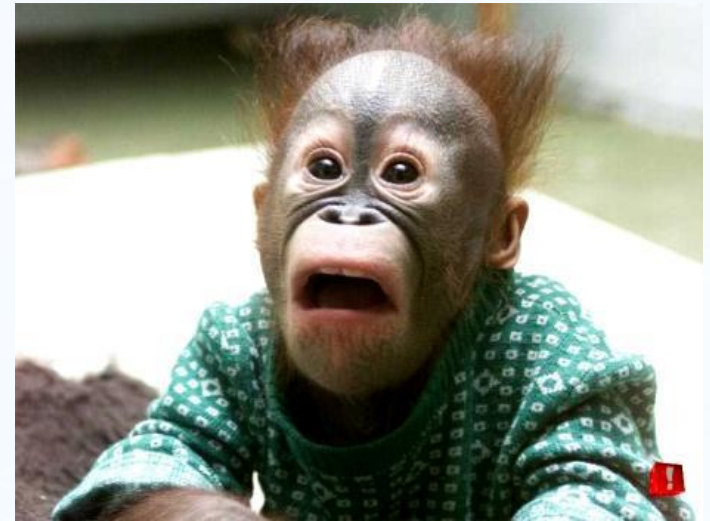
# Mezirow's (2002) Model

- Informative learning – changes what we know
- Transformative learning – changes how we know; a change in perspective
- Emphasizes reflection on previously held assumptions about the world to arrive at a new world view
  - Ten step process to perspective transformation



# The Ten Steps to Perspective Transformation

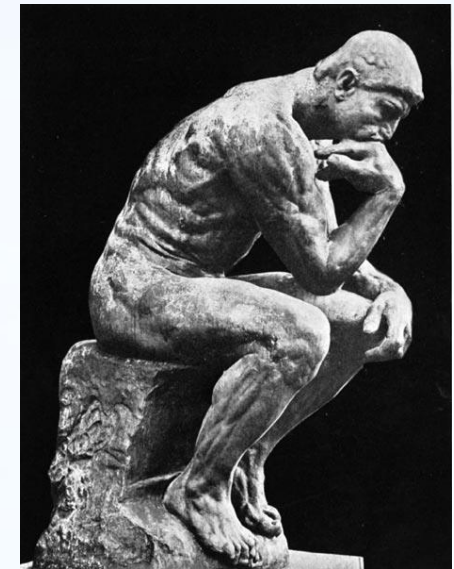
1. People experience a “disorienting dilemma”
  - e.g., the discovery that teaching is much harder than they thought it would be
2. People experience “fear, guilt, anger, shock, shame, etc.”
  - e.g., they feel shame that they are having difficulty doing this job for which they prepared





# The Ten Steps to Perspective Transformation

3. People critically assess their assumptions about the world.
  - e.g., is the problem really them and their preparation, or is it a host of external characteristics?
4. People realize others have gone through what they are going through.
  - e.g., they realize others have also struggled in their first years of practice





# The Ten Steps to Perspective Transformation

5. People explore new roles, relationships, and actions.
  - e.g., they explore how they might be able to find someone to assist them, such as a mentor or coach
6. People plan a course of action
  - e.g., they plan how they are going about learning new skills and abilities, perhaps with their mentor or coach



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# The Ten Steps to Perspective Transformation

7. People gain knowledge for implementing plans
  - They figure out what they need to do to be more effective teachers
8. People try out their new role
  - Use the new skills they have learned



# The Ten Steps to Perspective Transformation

9. People become more confident and competent in the new role
10. People reintegrate into their lives based on the conditions dictated by their new perspective

Mezirow says this process is irreversible



# Empirical Evidence

- Over 40 studies reviewed (Taylor, 1998).
- Most support the model
- However, very few studies provide actual data supporting each step
- Again, not clear it is a testable theory
- Clear need for meta-analysis

# **New Perspectives II: Self-Directed Learning**

# Self-Directed Learning

- Tough (1967, 1971) provides the first comprehensive description of self-directed learning as a form of study
- Tough studied and described the self-planned learning projects of sixty-six Canadians
- Defined learning that is widespread, that occurs as part of adults' everyday life, and that is systematic yet does not depend on an instructor or a classroom (note, emphasizes incidental learning, intrinsic motivation)

# Goals of Self-Directed Learning

- Humanistic – the development of a learner’s capacity to be self-directed
- Transformational - critical reflection is an “understanding of the historical, cultural, and biographical reasons for one’s needs, wants, and interests. . . .Such self-knowledge is a prerequisite for autonomy in self-directed learning”
- Promotion of “emancipatory” learning and social action – giving a sense of control to people to make changes



# Process of Self-Directed Learning

- Self-directed learning is the process in which people take the primary initiative for planning, carrying out, and evaluating their own learning experiences





# Attributes of Self-Directed Learners

- “Internal state of psychological readiness to undertake self-directed learning” (Oddi, 1986)
- “Readiness” may be a person’s “persistence in learning, enjoyment of learning, curiosity, and goal orientation” (Guglielmino, 1997)

# Sequential Model (Tough, 1971)

- Key components
  - 13 step model includes deciding what, where, and when to learn
  - Also, setting deadlines, getting resources, finding time to learn, increasing motivation, etc.

# Instructional Model (Grow, 1991)

- 4 stages of learners
  - Stage 1: Low in self-directions and seek guidance from instructor
  - Stage 2: Have moderate self-direction and are interested in learning
  - Stage 3: Active learners but need a guide
  - Stage 4: High in self-directions. At times consult instructors

# Transformational Model (Drago-Severson, 2009)

- 3 ways a person knows:
  1. Instrumental – thinks concretely and is oriented toward following rules and procedures. Cannot fully consider another’s perspective
  2. Socializing – can think abstractly and consider others’ perspectives. Lacks perspective on his/her relationships
  3. Self-authoring – thinks abstractly, considers others’ perspectives. Can reflect on his/her relationships but has not yet fully realized that others can have completely opposite points of view

# Transformational Model (Drago-Severson, 2009)

- Four practices to promote transformational learning or growth:
  1. Teaming
  2. Providing leadership roles
  3. Collegial Inquiry – shared dialogue with others
  4. Mentoring

# The Missing Ingredient: Adult Development

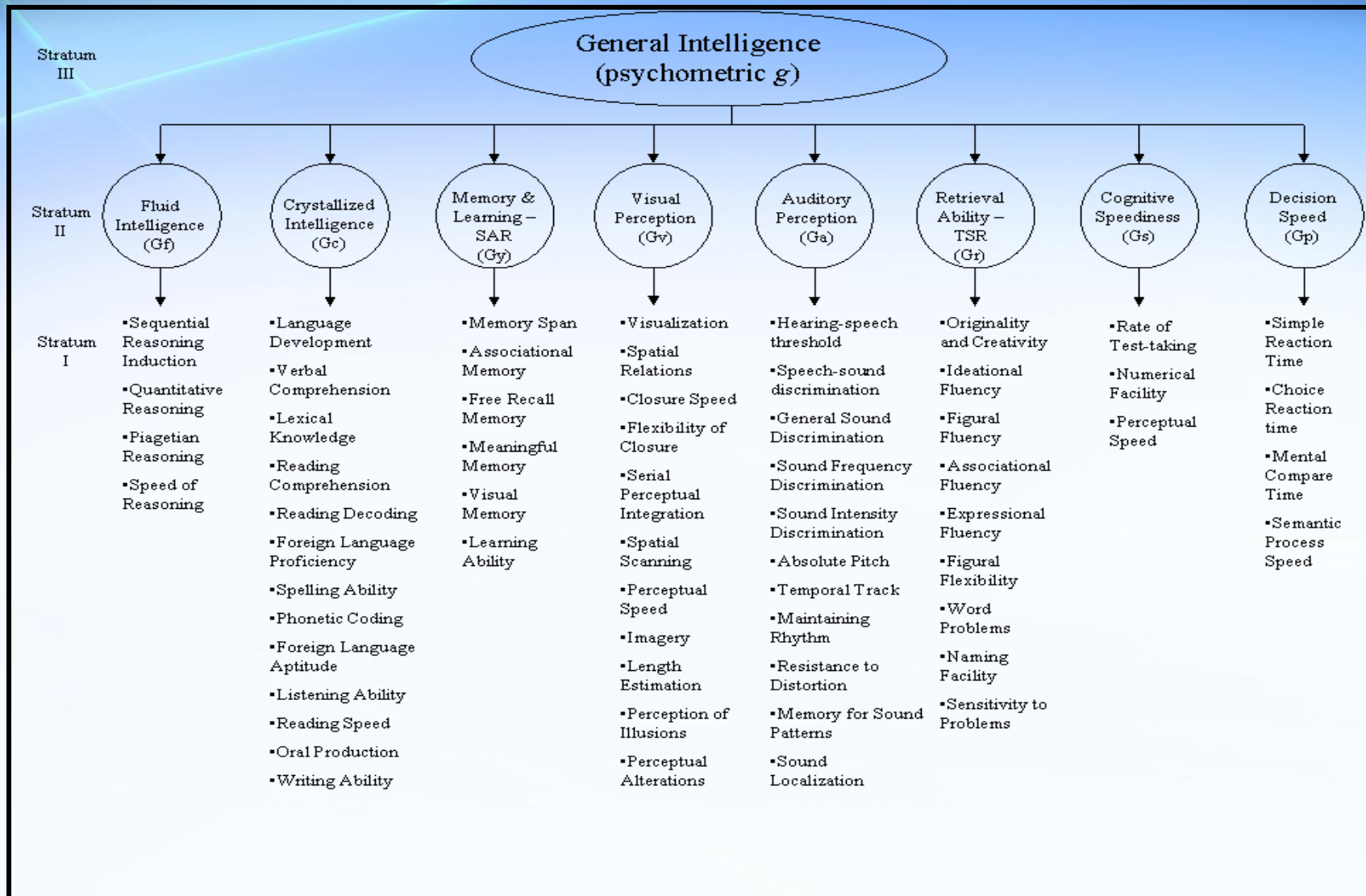
# An Investment Model

- Adult learning is dynamic (if not true, all previous “theories” would be immediately falsifiable)
- Cognitive ability, interests, affect, and personality inter-relate in complex ways to influence adult learning and development
- Key figures: Cattell, Horn, Ackerman
- My assumption: Knowing a little about the current research in these fields will help you better understand strategies and principles for getting the most out of the adult learner (and adult learning)



# Cognitive Ability





# Fluid Intelligence Tests

## Letter Series

Find the rule underlying a series of letters

A R B R C R D ? ?

F F C H H E J J G L L ? ?

## Nonsense Syllogisms

Judge the correctness (i.e. True or False) of the conclusion to this nonsensical syllogism:

All haystacks are catfish.

All catfish are typewriters.

Therefore all haystacks are typewriters.

# **SAR: Short-term Memory & Retrieval**

## **Digit Span (Forward and Backward)**

2 4 6 7 5 9 (Recall)

## **First and Last Names**

In a study phase 21 names like Janet Gregory, Thomas Adams and Richard Roberts are presented in a 4 minute study phase. During the test phase subjects have to recall the **FIRST NAMES** that go with each last name

# Gs: Cognitive Speed

## Number Verification

Stimuli            not less than six    greater than two

Response                                7                                3

## Odd-Man-Out Symbol

Stimuli            ↑↓↓←↑←→↑    ↓←↑←↑←→↑

Response            ↑↓↓←↑←→↑    ↓←↑←↑←→↑

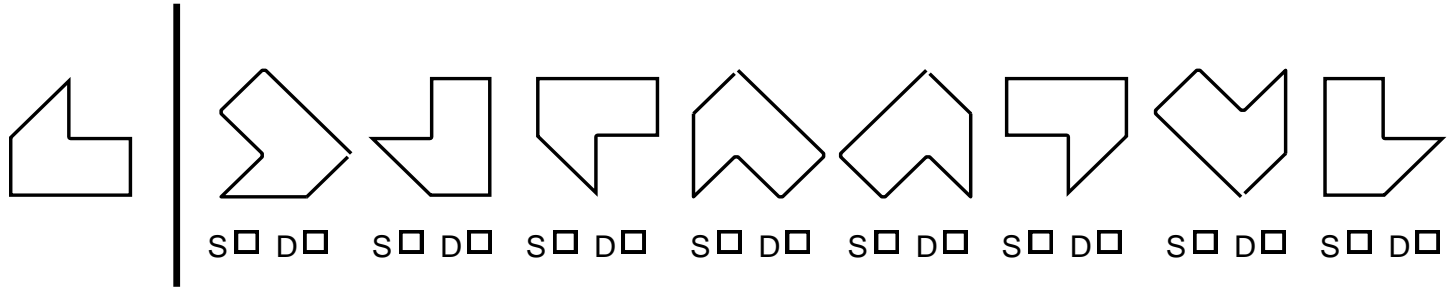
## Number Comparison

367954381937 - 367954381937

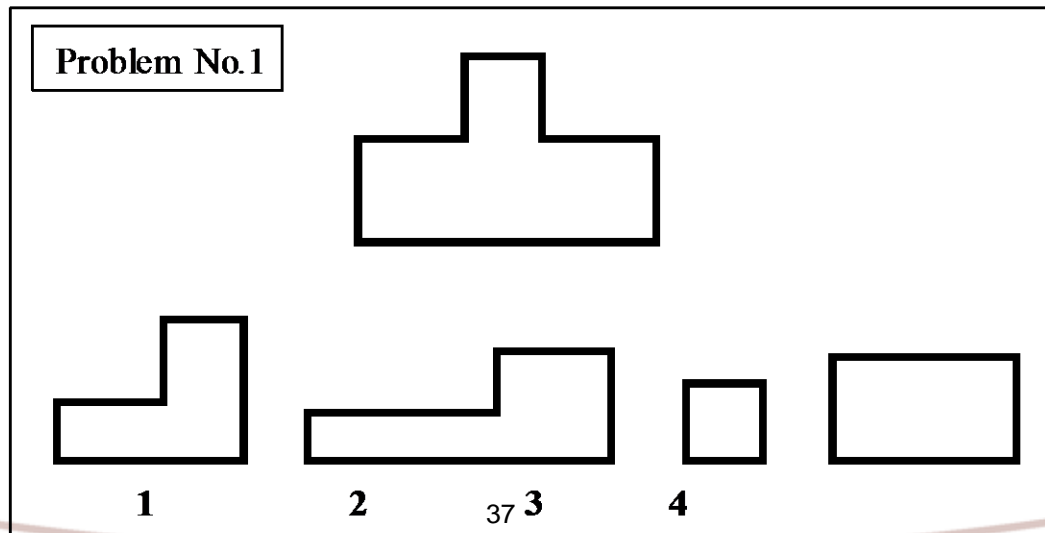
25698472365 - 25698479365

# Gv: Spatial Intelligence

## Card Rotations



## Form Boards



# Crystallized (Gc) Intelligence Tests

## General Knowledge

The author of the book "The Life and Opinions of Tristram Shandy" was?

## Disemvowelled Words

Fill in the vowels of the following:

m\_t\_l\_t\_

## Scrambled Words

Unscramble the following letters to make a word.

ahgul

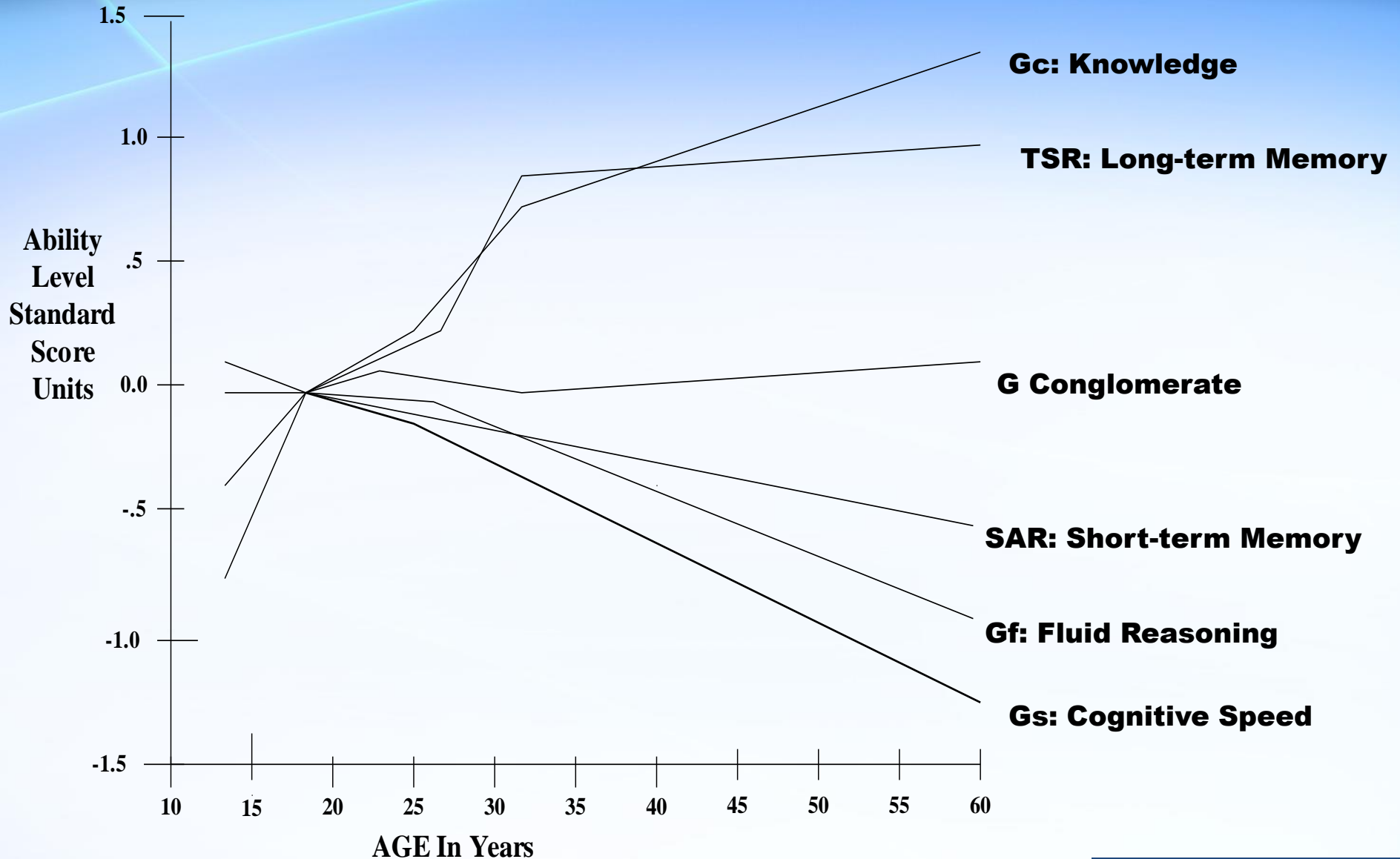
# TSR: Tertiary Storage & Retrieval

## Word Associations

Produce a word that is associated with both of two given words but which has a different meaning in its relationship to each.

JEWELLERY - BELL  
NUMBER - NOBILITY  
PIG - EYE  
CARD - SHIP

# Adulthood Age Differences







# Personality

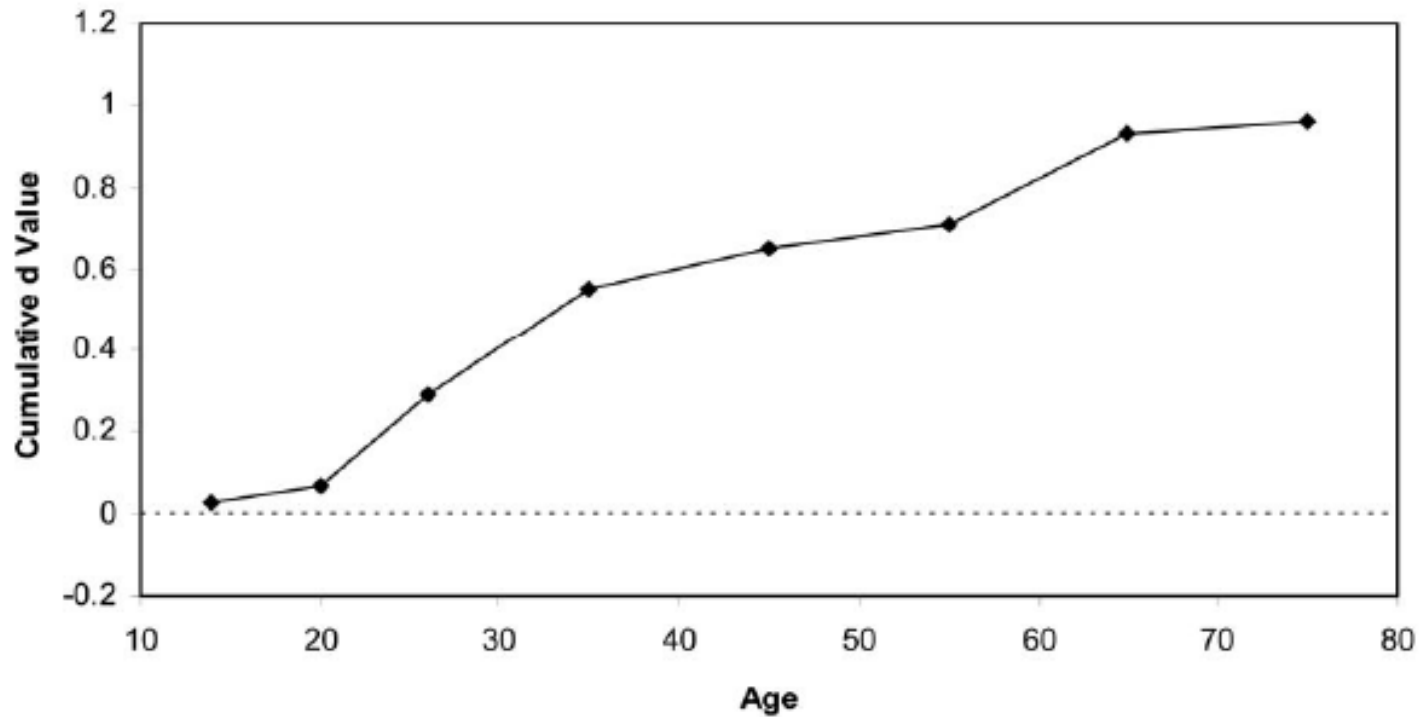
# The Big Five Personality Model

- **Extraversion**
  - Warmth
  - Gregariousness
  - Assertiveness
  - Activity
  - Excitement seeking
  - Positive emotions
- **Agreeableness**
  - Trust
  - Straightforwardness
  - Altruism
  - Compliance
  - Modesty
  - Tendermindedness
- **Conscientiousness**
  - Competence
  - Order
  - Dutifulness
  - Achievement striving
  - Self-discipline
  - Deliberation
- **Neuroticism**
  - Anxiety
  - Hostility
  - Depression
  - Self-consciousness
  - Impulsiveness
  - Vulnerability to stress
- **Openness**
  - Fantasy
  - Aesthetic
  - Feelings
  - Actions
  - Ideas
  - Values

<http://ipip.ori.org/ipip>

# Adulthood Personality Change

## Conscientiousness





# Wrap-Up

# Summary

- Understanding the adult learner would seem important for teacher leadership (both from the perspective of self and others)
- Current models of adult learning are rather impoverished compared to those for children
- Self-directed learning models do, however, offer promise
- But rest on a set of assumptions around adult development; which are fortunately demonstrably verifiable



**Questions?  
Comments?  
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