

PSY 254 Precept 5: Cognitive Development

AI/Preceptor: Alexander Ku alexku@princeton.edu He/him/his

Today's agenda

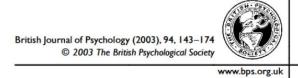
- What does poor science writing look like (ex. Rush, Little Baby)?
- How do we evaluate children (Failing at Four)?
- Journal Article Assignment Rubric

John Oliver - segment on media (mis)representations of scientific articles



Critique Your Articles!





Foundation literacy acquisition in European orthographies

Philip H. K. Seymour¹*, Mikko Aro² and Jane M. Erskine^{1,2} in collaboration with COST Action A8 network²

¹University of Dundee, Scotland, UK

²University of Jyväskylä, Finland

end of the first school year. There are some exceptions, notably in French, Portuguese,

Danish, and, particularly, in English. The effects appear not to be attributable to differences in age of starting or letter knowledge. It is argued that fundamental linguistic

differences in syllabic complexity and orthographic depth are responsible. Syllabic

Critique Your Articles

- 1. In groups of 3, briefly share the main points of your article.
- 2. Pick one of the articles (make sure it cites a finding or paper!).
- 3. Fact check one or two cited findings of the paper.
- 4. Discuss based on whether the claims hold up.

Today's agenda

- * What does poor science writing look like (ex. Rush, Little Baby)?
- How do we evaluate children (Failing at Four)?
- Journal Article Assignment Rubric

Failing at Four

WPPSI - Wechsler Preschool and Primary Scale of Intelligence

Full Scale Fluid Reasoning **Processing Speed Verbal Comprehension Visual Spatial Working Memory** Matrix Reasoning Bug Search **Block Design** Picture Memory Information Cancellation Object Assembly Picture Concepts Zoo Locations Similarities Animal Coding Vocabulary Comprehension **Primary Index Scales** Fluid Reasoning **Verbal Comprehension Visual Spatial Working Memory Processing Speed** Bug Search Matrix Reasoning **Block Design** Picture Memory Information Picture Concepts Cancellation Object Assembly Similarities Zoo Locations

Ancillary Index Scales

Vocabulary Acquisition

Receptive Vocabulary Picture Naming

Nonverbal

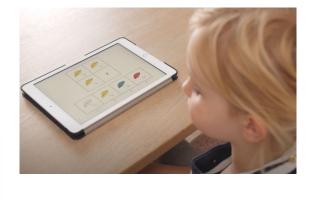
Block Design Object Assembly Matrix Reasoning Picture Concepts Picture Memory Zoo Locations Bug Search Cancellation Animal Coding

General Ability

Information
Similarities
Vocabulary
Comprehension
Block Design
Object Assembly
Matrix Reasoning
Picture Concepts

Cognitive Proficiency

Picture Memory Zoo Locations Bug Search Cancellation Animal Coding



Test score report

Interpretative Report

Can we intervene meaningfully to improve cognitive development of children?

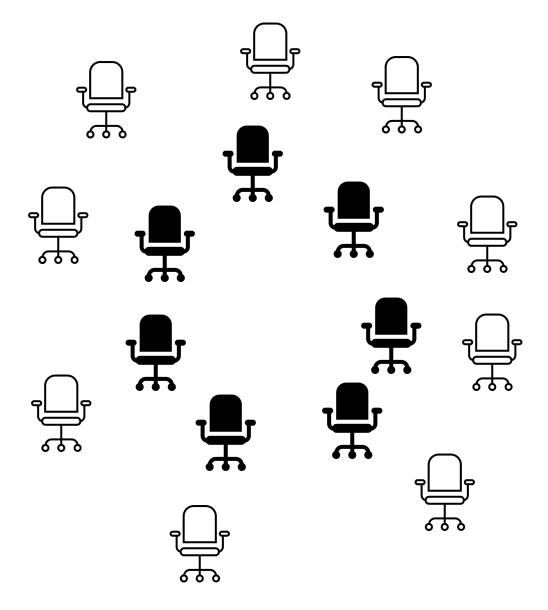
Is it possible to make these interventions in a way that doesn't exacerbate existing inequalities?

Thoughts to Consider

1. There is inequity in access to high-quality, enriching cognitive environments (see Rindermann & Baumeister, 2015)

2. There's a window for normal development, and differences between children within this window are normal (see Steinberg, 2011)

Failing at Four



Failing at Four

Take a moment to reflect on a person/time that shaped your experience as a learner. Share it with the class!

What did you think about the article?

How should we evaluate children?



What would Piaget say?



"The principal goal of education in the schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done"

The adolescent can reason abstractly and think in hypothetical terms.

Formal operational (12 years-adult)

The child can think logically about concrete objects and can thus add and subtract. The child also understands conservation.

Concrete operational (7–12 years)

The child uses symbols (words and images) to represent objects but does not reason logically. The child also has the ability to pretend. During this stage, the child is egocentric.

Preoperational (2-6 years)

The infant explores the world through direct sensory and motor contact. Object permanence and separation anxiety develop during this stage.

Sensorimotor (0-2 years)

Today's agenda

- * What does poor science writing look like (ex. Rush, Little Baby)?
- * How do we evaluate children (Failing at Four)?
- Journal Article Assignment Rubric

You make the journal article rubric

Assignment:

- 1. Provide an overview of the critical issues, report on relevant research findings, and state a clear hypothesis (~2 pages)
- 2. Describe the methods of your hypothetical research study (~2 pages)
- 3. Interpret what the predicted results would mean(~2 pages).

Overall quality of the paper (10 points max)			
Scientific tone	2 points	1 point	0 point
	Professional: Sounds like a journal article we read	Beginner: Sounds like a school report written by a student	Unprofessional: Uses first-person pronouns and opinions
Typos & grammer errors	2 points	1 point	0 point
	No obvious typos/errors	1-3 obvious typos/errors	4+ obvious typos/errors
Length of the paper	4 points	2 points	0 point
	5.5 to 6 pages (including figures)	A little too long (6.1 to 6.5 pages)	Too long (6.5 pages+) Or too short (less than 5.5 pages)
Structure	2 points	1 points	0 points
	Great structure. Brings up three or more pieces of relevant literature - shows clear intent of use for each piece. Moves through information logically.	Okay structure. Brings up one or two pieces of relevant literature - shows intent to use each piece well. Moves through information somewhat logically.	Bad structure. Brings up one piece of relevant literature (or more than one irelavant pieces) - no intent to use each piece. Moves through information illogically.



Rubric

For next class:

- **NO** READING ASSIGNMENT or MCQ due next week.
 - This week's MCQ is still due

- REMINDER: Midterm next Thursday
 - Will review in precept on Tuesday
- Precept website: <u>alexyku.github.io/psy254</u>
 - Anonymous feedback





PSY 254 Precept 5: Cognitive Development

AI/Preceptor: Alexander Ku alexku@princeton.edu
He/him/his