

## Cognitive Development in Early Childhood

PSY 356  
Dr. Schuetze

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### Piaget - Preoperational Stage

- 2 to 7 years
- Preoperational thought: children use mental representations for objects and events.
- Operations: logical processes that can be reversed.
  - Children at this age do not think using operations (thus, preoperational)

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### Representational Thought

- Language
  - Average 2 year old: 200 words
  - Average 6 year old: 10,000 words
  - Increased vocabulary gives children the ability to talk about things that are not present.
- Art
  - Increased complexity in art work

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### Representation in Art



Drawing by 2 Year Old



Drawing by 4 Year Old  
The Wiggles

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### Representation in Art



- This drawing was done by a 6 year old who was depicting what she would like to have in her local neighborhood.

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### Representation in Play

- Symbolic play: Children use one object to stand for another
  - 18 months – pretend to talk on phone if they have play phone
  - Age 2 – can use banana as phone
  - Age 5 – can use anything as a phone (even if it does not look like a phone).

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## Symbolic Play



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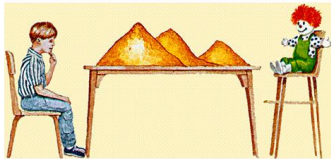
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## Preoperational Thinking

- Egocentrism: inability to take another person's perspective

Piaget, Jean. *Human Development*. 7th. Copyright © 1988. McGraw-Hill Companies, Inc. All Rights Reserved.

### Piaget's Mountain Task



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## Preoperational Thinking

- Magical Thought:  
Inability to separate  
fantasy from reality
  - Animism: attributing  
animate characteristics  
to inanimate objects



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## Piaget's Legacy

- Influenced education
  - Development of interactive and hands-on materials for active learners
  - Guidelines for when to introduce topics based on cognitive development

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## Vygotsky

- Lev Vygotsky (1896-1934)
  - Born in what would become part of the Soviet Union
  - Marxist – believed in equality for all
  - Wrote several books/articles before death (age 38) – most not published until long after his death from tuberculosis.

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## Vygotsky's Theory

- Central idea: Children develop cognitive structures from their culture and their social interactions
  - Children listen to social speech
  - Turn social speech into private speech (said outloud to themselves)
- Internalization: external activity and speech become silent inner speech as children master tasks and concepts

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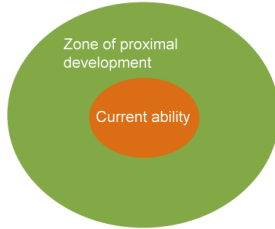
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## Vygotsky's Theory

- Zone of proximal development: range of problems children can solve with assistance
  - Cognitive structures in this zone are ones the child has started to internalize



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## Vygotsky's Theory

- Effective instruction involves giving child challenges, along with help in solving them.
- Scaffolding: temporary support for child while cognitive structure is being developed.



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## Information Processing

- Theory of Mind: framework of concepts about how the mind works and why it works that way
  - Appearance-reality distinction: young children do not understand the difference between how something appears to be and how it really is
    - E.g., Daddy wearing a monster mask is not Daddy anymore to a 3 year old.

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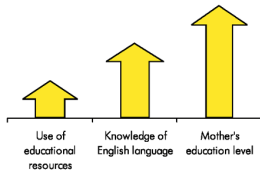
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## Vocabulary Development

Figure 12 – Factors associated with vocabulary development



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## Learning Syntax

- Children learn how to combine words and form sentences gradually
  - Where Daddy?
  - Where Daddy is?
  - Where is Daddy?
- Age 3 – begin adding word endings (-s, -ing, -ed)
- Overregularization
  - “foots”
  - “goed”

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