

# The Role of Sign Mediator and Human Mediator in Mobilizing Older Children's Thinking:

A Research on Picture Book Reading at the Confluence of Two Pathways of Post-Vygotskian Studies

# I. Anchor of this study: Vygotsky's theoretical and methodological positions

- ❑ Mediating activities via cultural signs as integral to the development of higher psychological processes.
- ❑ Co-emphasis of sign mediator and human mediator as facilitators of the development of HPP
- ❑ Thinking and speech are interwoven into one another.
- ❑ Development of **thinking** as having decisive significance for all other higher psychological processes.
- ❑ HPP are not fixed entities awaiting descriptive analysis, but are processes that undergo development, awaiting genetic analysis of their real origins: “experimental-genetic” method
- ❑ Holistic approach of analysis

# Vygotsky's Writings

## Two Mediators Co-emphasized

I. Human Mediator: Influence of another person on the developing child

*E.g. General genetic law of cultural development, Zone of Proximal Development (ZPD) (1978)*

II. Sign Mediator: Use of signs to take charge of one's own psychological processes

*E.g. Casting lots, tying knots, counting fingers; more advanced ones include language, counting, reading, writing, works of art, maps, all kinds of conventional signs; less discussed version of ZPD (1967)*

# Post-Vygotskian Studies on Learning & Development

## Two Pathways of Analysis

(Stetsenko, 1999; Kozulin, 2003)

I. Interpersonal Aspects OR  
Human Mediator Focus

*Represented by U.S.  
sociocultural research tradition.*

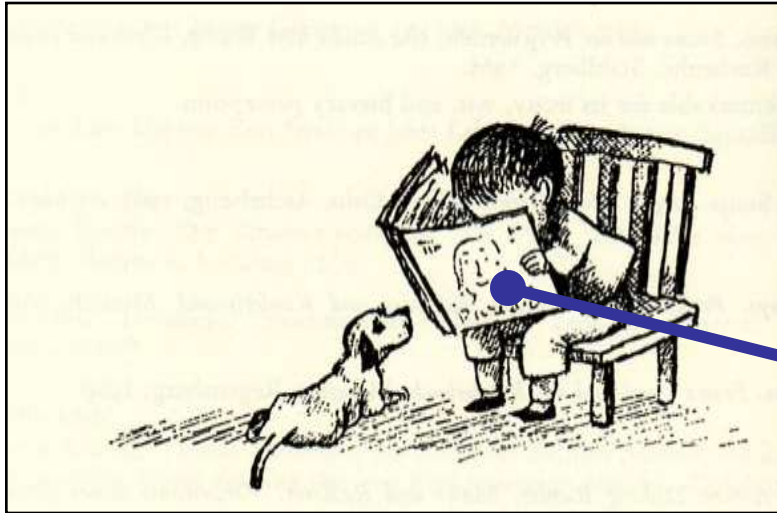
*E.g. Rogoff*

II. Semiotic Aspects OR  
Sign Mediator Focus

*Represented by Russian  
developmental & instructional  
psychology.*

*E.g. Gal'perin*

# Divergent pathways of analysis on how thinking develops under picture book reading??



...under child's solitary reading of picture book, **one** focus is enough for the nature of phenomenon:

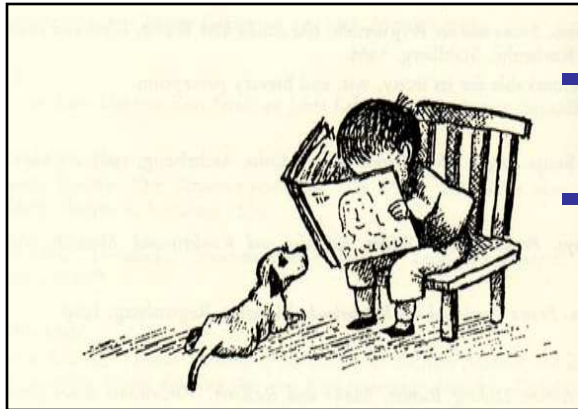
1. Sign mediator



...under parent-child co-reading of picture book, **two** foci are needed:

1. Human Mediator
2. Sign mediator

# This Study's Interest: Role of Five Conditions in Mobilizing older children's thinking



SS. Child reading *Frederick* alone

SE. Child reading *Frederick* alone, with **prompts** in the form of word and images (i.e., enriched sign mediator) that would instigate self-referencing on the part of the reader



HL. Co-reading of *Frederick*, with **labelling** as the focus of adult-child discourse

HC. Co-reading of *Frederick*, with adult **contradicting** child's thoughts from time to time

HS. Co-reading of *Frederick*, with adult **strengthening** child's thoughts with further questioning from time to time

## II. Overarching Research Questions

1. How does thinking arise and proceed along these five different picture book reading conditions?
2. What is the role of each of the five specific forms of sign mediator and/or human mediator in mobilizing specific aspect(s) of older children's thinking?

# Participants

- 42 children (21 boys, 21 girls) of age 8-9 attending an aided primary school in Tai Po District.
- Cantonese speaking, high ability children of middle class family background.
- With parents' written consent to participate in the study.

## General characteristics of children aged 8-9

1. Not long past the second age of questions (Age 7)
2. Attained mastery of all concepts about print (Paris & Paris, 2006)
3. In “golden period of drawings” (Age 2-10) (Stetsenko, 1995, p.148; Malchiodi, 1998)



# Procedure

- Each participant went through 5 phases on one single session that lasted within 45 minutes.
- Observations were made by the researcher on a one-to-one basis for all phases. All phases were audio-taped.
- Observations took place in a quiet room of the primary school that the participants were attending.

# Procedure: The Five Phases

Phase 1: CPS & Questioning before reading

Phase 2: Warm-up reading exercise

Phase 3: Reading of *Frederick* [Intervention]

Phase 4: CPS & Questioning after reading

Phase 5: Draw-and-tell

# Materials

- Phase 2: Excerpts from the Chinese version of Sendak's (1963) *Where the wild things are* were used.
- Phase 3: A newly translated Chinese version of Lionni's (1967) *Frederick* was used.
- Phase 5: Broad array of media for drawing

# Phase 3: Reading of *Frederick*

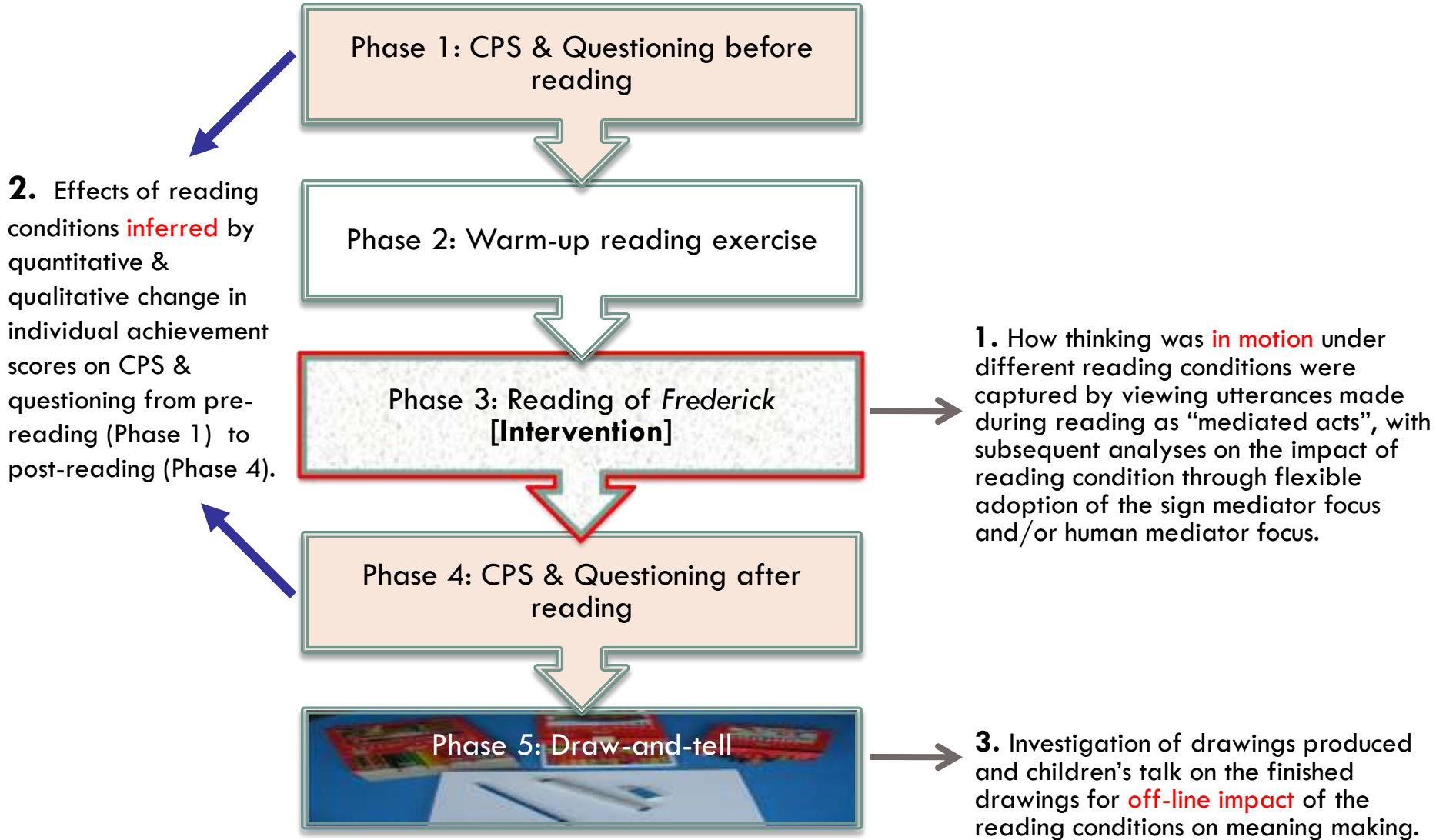
Same opening for all conditions

- *“Now we are ready to read Frederick. I trust you to be capable of reading this book by yourself and do not need any help from me. As you go along reading this book, I want you to pop out in your words whatever thoughts that have arisen in your mind: whatever you think about. You don’t need to recount the content of the book to me—all those I knew well. I need you to tell me whatever special and interesting ideas and questions you think of as you go along reading the book. Remember this: Once you think of something, pop it out in your words. Close the book when you finish reading.”*

Same ending for all conditions

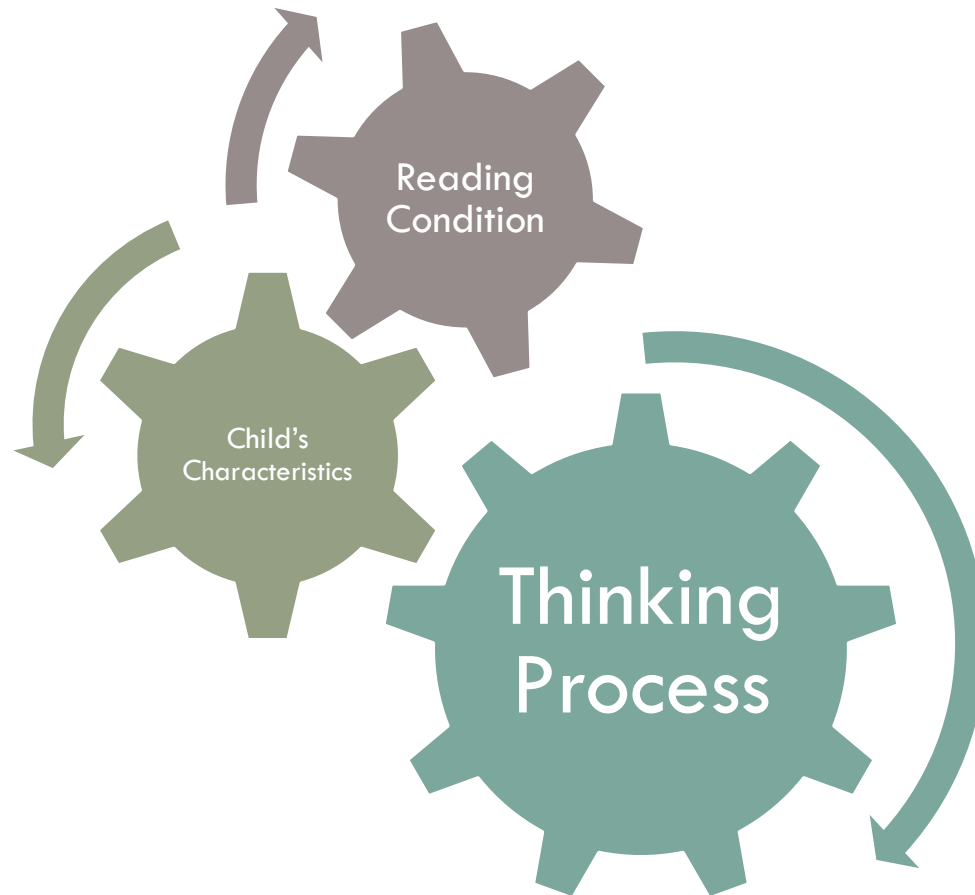
The reading phase ended when the child finished reading the book and closed it.

# Analyzing the Role of the Five Conditions in Mobilizing Thinking



# Holistic Approach to Analyzing the Role of the Five Conditions in Mobilizing Thinking: Case Examination

Search for findings NOT confined to a particular phase of study or a particular aspect of thinking



# Holistic Approach to Case

- Via holistic analysis by case, it has been found that although 8 to 9 cases subsumed under the same reading condition, the impact of the reading condition varied. *Whether the potential inherent in the setting of each of reading condition could be brought forth depends on how the child related to it.*
- An illustration with two SE cases: SE30, SE07

## SE30: Awareness of the self weaves seamlessly into *Frederick*



- The participant portrayed herself as the person who was sitting on the rock. “Frederick” was written inside the thinking bubble above head: meaning that she was thinking about Frederick at the time when she was reading *Frederick*. She narrated on her drawing:

*I am thinking about Frederick's narrative. He said he was gathering those stuffs. And I feel that I am similarly gathering from the book its words, food, joyful colours, and the sun.*

- All of the utterances produced by SE30 during reading were made in response to the prompts.
- Questioning activity and CPS scores increased after reading.

## SE07: Religious dimension of self coming to the fore



- Drawing of child's imagined life in heaven, a drawing that reminds nothing of *Frederick*.

*Uh. I just answered one (question): "Whose spoken words warm most?" Right away, I thought of what the Principal (of the Sunday school) said to me.... This makes me think of what would be like when I rise up to paradise in heaven.*

- Subject of religion also emerged in relation to two other prompts on DS13:

*Not fond of the poem! I don't like this poem because I prefer attending Sunday school. Pray accordingly and all those things (allegedly the several kinds of gloomy feelings depicted in the poem) wouldn't have happened at all.*

- Fluency & originality scores decreased, but quantity of questions increased after reading. The only question after draw-and-tell remained fastened on the topic of religion.



## Brief Summary on Varied Impact of the Same Reading Condition obtained via Case Examination

### Varied Impacts of Reading Condition

SS33: Total concentration in the content of *Frederick*

SS21: Liberty exercised in interpreting

SE30: “Self” integrating with *Frederick*

SE07: Bringing forth religious preoccupation of the child

HL40: Attention drawn to details of word and image of *Frederick*

HL02: Interweaving of life experience into reading

HC44: Casting change on initial negative evaluation of *Frederick*

HC08: Triggering resistance to change and disheartening

HS42: Engaged discussion with adult

HS22: Little motivation to read *Frederick* and to discuss with adult

# Discussion

- The findings reveal that in some cases, the subsequent development in meaning making exceeded what can be made out of the adult-child dialogue in the reading phase, indicating inadequacy with the **U.S. socio-cultural approach's** sole focus on communicative activity.

## Thinking, drawing & middle childhood

- Vygotsky's "dynamic unity of psychological processes" has so far stimulated a body of research analyzing parallels between oral/written forms of language & drawing in early childhood.

In light of cases where the richness of meaning made through drawing has exceeded what can be anticipated from the verbal utterances produced in the reading, it emerged from our findings that drawing has its significant role to play in the overall development of middle childhood. Children's voluntary disclosure of feelings and moral beliefs through draw-and-tell has brought to light a broader view of Vygotsky's "dynamic unity": the interweaving of the cognitive, affective and the moral.

# Methodological Implication

- ❑ Children's speaking out their thoughts once they occurred during reading
  1. has facilitated the application of the microgenetic approach
  2. has served to provide rich findings about children's initial and subsequent thoughts in the course of reading.

Such method worth to be implemented in other studies on children's reading.

# Further Deliberation

- With regard to the method that gives genesis to utterances and analysis of this study, in what ways is it similar to or different from the think aloud method?
- Is dynamic interrelation between thinking and speech a presupposition of the think aloud method?