Title: You are an Adult and You Still Think-out-loud?

Two Empirical Studies on External Self-talk

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INTRO (Study 1)

- Recent evidence changes the notion that TOL is only helpful in childhood and is destined be replaced by inner speech before adulthood.
- A clean testing paradigm is needed to clarify the causal link of TOL on cognitive performance

METHODS (Study 1)

- 1. Sample: 81 adults and 14 preschool kids
- **2. Measurements**: Time and Flips for each trial of a card-matching memory called Concentration
- 3. Within-subject design
- Think-out-loud: "Talk to yourself out loud as much as you can"
- Quiet: "Please keep quiet during the game"
- 4. Performance under the Quiet condition was an approximated measurement of expertise

RESULTS (Study 1)

- TOL benefits: Encouraging adults and preschoolers to think-out-loud during the memory task reduces their memory errors compared with keeping quiet.
- "Expertise reversal effect": Among adults, the more novices use think-out-loud, the less time they use to finish the task. However, this trend is reversed for experts

DISCUSSION (Study 1)

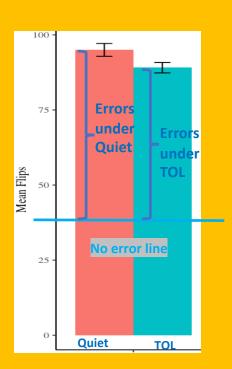
 The experiment suggests that TOL might be a boon to adult's cognitive performance, rather than, as past literature suggests, just accompanying their behaviors.

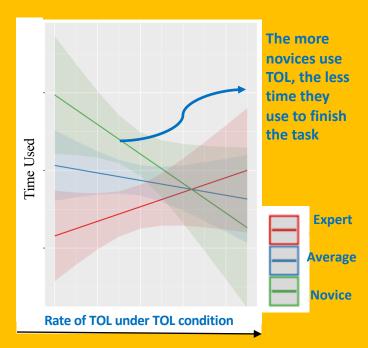
Study 1 An Experiment:

- Encouraging adults and preschoolers to Think-out-loud (TOL) reduces their memory errors compared with keeping quiet.
- "Expertise reversal effect" (Quiet performance as expertise)

Study 2 Experience Sampling method (ESM):

 TOL has higher momentary well-being, pleasantness, and clarity than inner speech in adults.





INTRO (Study 2)

- Phenomenology as a complementary approach of understanding TOL in adulthood
- Looking at whether people are happier when thinking out-loud than keeping the self-talk inside (inner speech).

METHODS (Study 2)

- 1. Sample: 821 college students
- Assessed momentary well-being, self-talk type (TOL vs. inner speech), pleasantness of thought, and clarity of thought, using ESM
- 3. Multilevel modeling with Activity and Participant as crossed random factors

RESULTS (Study 2)

- TOL has higher momentary well-being than inner speech
- TOL is also associated with higher clarity, and higher pleasantness than inner speech
- But it might be mediated by the fact that private speech has more positive content and clearer than inner speech.



DISCUSSION (Study 2)

• TOL differs with Inner speech phenomenologically