

Speech-Language Pathology  
Interventions for Children with  
Executive Function Deficits: A  
Systematic Literature Review



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Results & Discussion

Empirical	Practitioner Papers
<b>Quasi-Experimental:</b> Direct instruction of strategies had positive impacts that persisted to re-evaluation 8 months later.	<b>Principles of Intervention:</b> Benefits to individualized plans that address memory processes and self-esteem in context. Discuss working memory training benefits being task-specific.
<b>Single-Case:</b> Need to be interpreted with caution! Some encouraging results, however inconsistent in applied techniques.	<b>Interventions – Language Disorder:</b> Instructions to combined language interventions with explicit strategies for executive function. Advocacy for variety of techniques.
<b>Case Studies:</b> Some encouraging results with a variety of strategies and collaboration with classroom teachers.	<b>Interventions – EF &amp; ADHD:</b> Advocates for collaboration and instructional/environmental strategies, metacognitive strategies, and multi-sensory approaches.

\*Note: Computerized Working Memory Training (CWMT) had short-term improvements in trained tasks, but no evidence for long-term, generalized improvements.

SLPs can address EF deficits through:

- \* Direct intervention
- \* Embedded within speech/language activities
- \* Indirect services such as accommodations (environmental & instructional) and consultation

Visual tools to track steps

Can help the student

Remember what comes next

Vocabulary

Story structure

Connect concepts

Strategies

Make implicit explicit

Visual component takes strain off working memory

Help to organize thoughts

1. Get Ready: When do I need to take my seat?

2. DO: What steps do I need to take to be ready? How long will each step take?

3. What will it look like when I am DONE? Follow Sketch/Picture

4. What materials do I need to do the step? Prepare my Space

5. Check the Time, create time markers and I may check again. Set timer to do it. I may need to stop and check on the 5 min point and determine if I have any time left. Follow Sketch/Picture/Signage

6. Know when to STOP. Give up the Step. Review What Worked? What did not Work?

Ward & Jacobsen, 2014

Smart but Scattered Kids.com

Daily Homework Planner

Subject/Assignment

Do I have all the materials?

Do I need help?

Who will help me?

How long will it take?

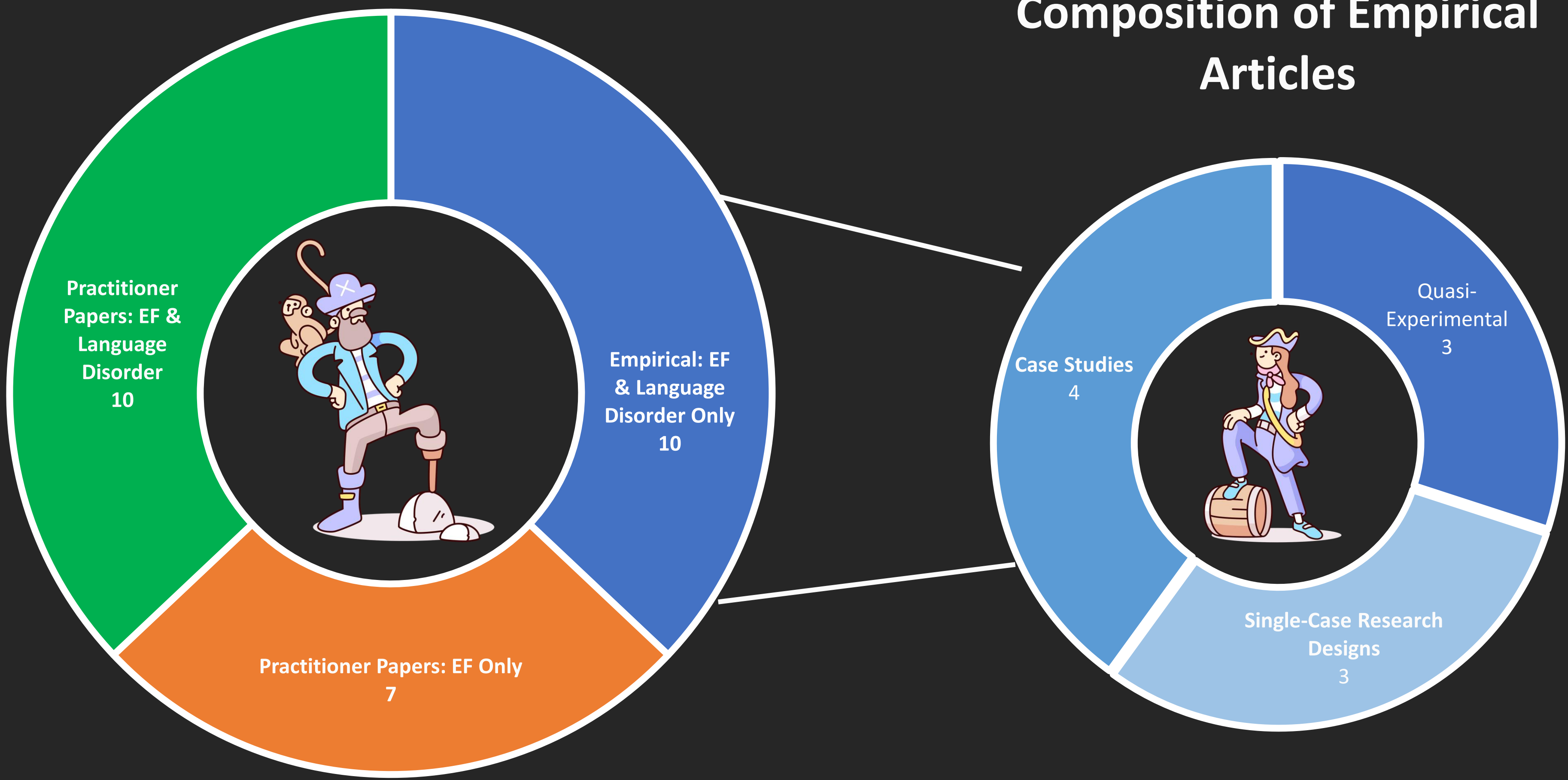
When will I start?

When will I take breaks?

What will be my reward for following my plan?

Many articles provide a framework for executive function intervention, but few measure their effect with children with co-occurring language disorders.

Composition of Included Articles



Take a picture to download the full paper

**BACKGROUND**  
Present papers are inadequate for providing evidence-based practice for children with executive function (EF) deficits with co-occurring language disorder.

EF domain	Difference between SLI and typically-developing	Source
Working Memory (phonological)	-1.27 SDs	Graf Estes et al., 2007
Working Memory (visuospatial)	-0.63 SDs	Vugs et al., 2013
Inhibitory control	-0.56 SDs	Pauls & Archibald, 2016
Flexibility	-0.27 SDs	Pauls & Archibald, 2016

- METHODS**
1. Identified 27 articles that fit criteria
  2. Organized articles into empirical and non-empirical
  3. Categorized content for each article

