

The PASS Theory: From Assessment to Intervention

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INTRODUCTION

- New ideas and innovative empirical research brought about a change in our attitudes towards **cognitive remediation**.
- Such remediation involves more than just correcting the child's mistakes. It also entails a theory which explains the mistakes and which provides a solid rationale for the remediation undertaken.
- If a child makes errors in reading, writing or arithmetic, a teacher can certainly teach the child to correct the specific errors. But this is not remediation; it is instruction – an activity in which the teachers engage day in and day out.

“Remediation begins where normal instruction ends”

(Das, 2000).

- Based on the PASS Theory of Intelligence, Das and his colleagues at the University of Alberta also developed a program for intervention called “**PASS Reading Enhancement Programme**” (PREP).
- In this communication are described the **essential elements** of the program and the **theoretical foundations of PREP**.
- Finally, are presented some **research results** with PREP.

The PASS Theory: From Assessment to Intervention

- The **PASS theory** describes four basic psychological processes, following largely from the neuropsychological work of Luria (1973). These cognitive processes (*Planning, Attention, Simultaneous* and *Successive processing*) are the basic building blocks of human intellectual functioning (Das, Naglieri & Kirby, 1994).
- This theory is operationalised in the **Cognitive Assessment System (CAS;** Naglieri & Das, 1997) which is a measure of cognitive ability designed as an alternative to traditional intelligence measures.
- The **PASS Reading Enhancement Programme (PREP)** was designed to improve simultaneous and successive processing that underlie reading, while at the same time avoiding the direct teaching of word reading skills (Cruz, 2005; Das, 1999, 2000; Fonseca & Cruz, 2001; Naglieri & Das, 2002).

What is PREP? What does it do?

- **PREP** consists of ten tasks that vary in content and processing emphasis. Each task involves both a global training component and a curriculum-related bridging component.
- The **global component** includes structured, non-reading tasks that require the application of simultaneous or successive strategies. These tasks (see fig.1) also provide children with the opportunity to internalize strategies in their own way, thus facilitating transfer (Das, Mishra, & Pool, 1995).
- The **bridging component** involves the same simultaneous or successive cognitive demands as their global counterparts, which have been closely linked to reading and spelling (Das, Naglieri, & Kirby, 1994).
- **Attention** and **Planning**, the two other PASS components, are also emphasized in each task. Specifically, attention is required and used in performing each task, and planning is augmented by encouraging the children to engage in discussions, both during and following their performance.

- The global tasks begin with a content that is familiar and non-threatening so that strategy acquisition occurs in small steps (Das, et. al., 1994).
- Complexity is introduced gradually, and only after a review of easier contents, so as to scaffold the development of competence in strategy use.
- The discussions of the strategies used by a student are intended to facilitate verbal mediation.
- This, in turn, will encourage a student to apply the strategies of the global and bridging components of PREP to academic tasks such as word decoding.

PREP - Joining Shapes (Successive)

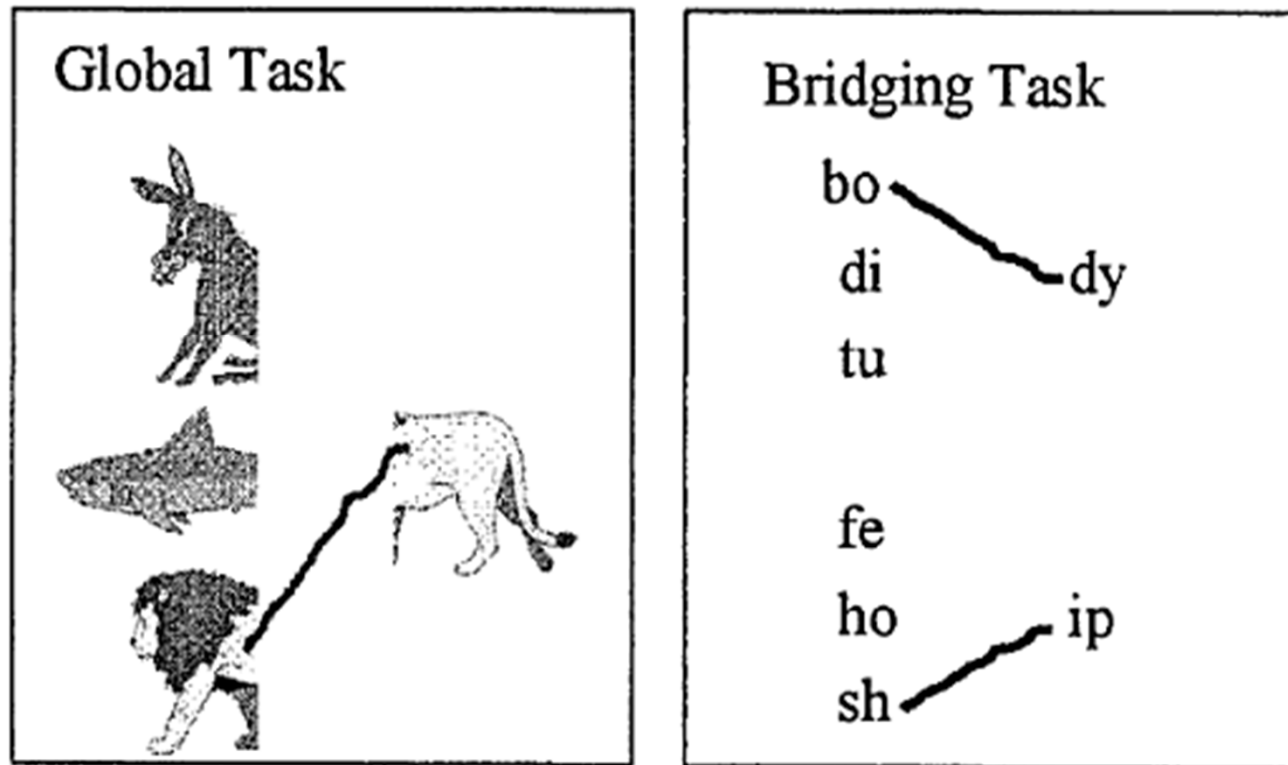


Fig. 1 – Illustration of PREP Global and Bridging Tasks

- The global and bridging components are further divided into **three levels of difficulty**. This allows the student to progress gradually in strategy development and, for those who already have some successful processing strategies in place, to begin at an appropriate level.
- A **system of prompts** is also integrated into each global and bridging component. The series of prompts creates a scaffolding network that supports and guides the child to ensure that tasks are completed with a minimum amount of assistance and a maximum amount of success.
- A record of these prompts provides a **monitoring system for teachers** to determine when material is too difficult, or when a child is able to successfully progress to a more difficult level (a criterion of 80% correct responses is required).

Theoretical Foundations of PREP

Theoretical bases of the cognitive training program can be conceptualized in four roots, three philosophies, two examples of training and one spirit (*See Figure 2*).

Figure 2: A Diagram explaining the theoretical foundations of PREP



Research Results

- The research with PREP has shown that a **combination of both global and bridging tasks** in the remediation program yields the **best training results** (Das, Mishra & Pool, 1995), whereas, the bridging task alone may not produce substantial improvement in reading although it is directly focused in reading (Cruz, 2005; Das, Parrila & Papadopoulos, 2000).
- It has also been found in research on **PREP**, that training may **improve cognitive processing** – as measured by PASS tasks – **in addition to improving reading** (Boden & Kirby, 1996; Caldeira, 2010; Carlson & Das, 1997; Cruz, 2005; Das et al., 1995; Das et. al., 2000; Fonseca & Cruz, 2001).

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Thank you for your Attention